US Navy Special Warfare Units in Korea and Vietnam

UDTs and SEALs, 1950–73

EUGENE LIPTAK

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Series editors Martin Windrow & Nick Reynolds

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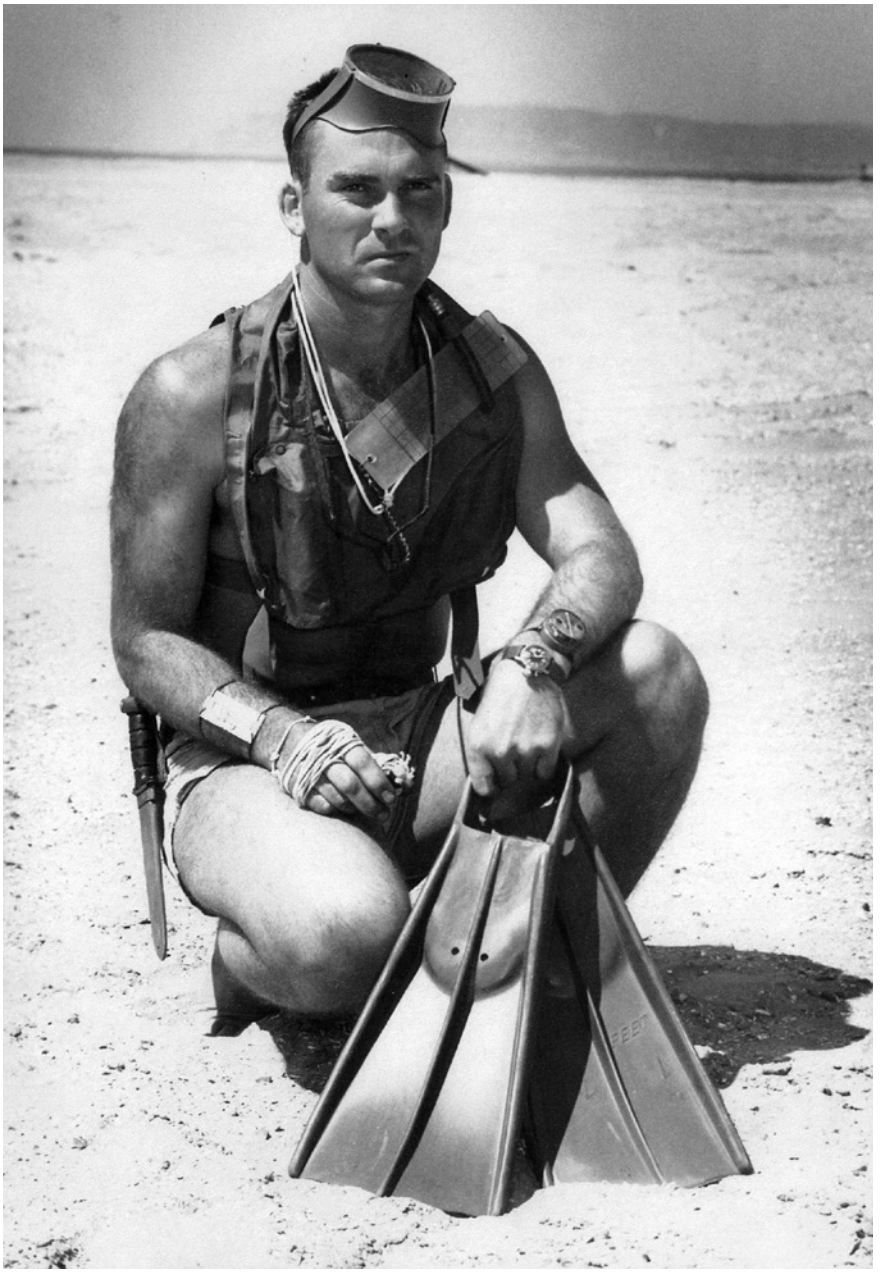
US NAVY SPECIAL WARFARE UNITS IN KOREA AND VIETNAM

UDTs AND SEALs, 1950–73

INTRODUCTION

Frogmen paddle ashore at Wonsan in October 1950 with an LCVP cruising offshore in support. This posed shot shows how UDT personnel deployed from an APD to the shore via landing craft and rubber boat. (80-G-421420 courtesy of the Naval History and Heritage Command)

With the end of World War II the US military experienced an extraordinary reduction of its forces that saw nearly all of its unconventional units disbanded. The US Navy's UDTs (underwater demolition teams) were retained in reduced numbers, however, to experiment with new innovations such as operating from submerged submarines and diving in frigid waters. The frogmen's special skills and operational necessity during the Korean War would entail operations behind enemy lines, yet their mission of surveying



Aside from the life vest on his chest, this frogman in Korea resembles one operating in the Pacific during World War II. Unlike his predecessors, however, his range of missions would expand to include clearing sea mines and conducting raids to demolish targets inland from the beach. (National UDT-SEAL Museum)

coastlines in preparation for amphibious landings remained primary. This continued over a decade later in South Vietnam, where frogmen surveyed the country's beaches and blew up obstacles along its waterways. By then the US Navy had established the SEAL (Sea, Air, and Land) teams as its own special-warfare unit to engage the enemy directly in maritime environments. While the missions and operations of both the UDTs and the SEAL teams remained distinct, they did begin to overlap in that both units engaged in demolitions and fighting the VC (Viet Cong) in small-unit actions. By the end of the Vietnam War, there were more similarities than differences in the capabilities of the UDTs and the SEAL teams. The UDTs were finally absorbed into the SEAL teams in 1983.

US NAVY UDTs IN THE KOREAN WAR: ORGANIZATION AND EQUIPMENT

The outbreak of the Korean War on June 25, 1950 came at a time when the US Navy had a total of four UDTs with a peacetime strength of 50 men each. UDT-1 and UDT-3, based at NAB (Naval Amphibious Base) Coronado, California, were soon sent to Korea, but neither would reach the full wartime strength of 10–12 officers and 75–80 enlisted men until the following November. Each UDT was divided into four operating platoons and one headquarters platoon. The stabilization of the front line along the 38th Parallel in the summer of 1951 eased concerns that the Korean War might expand and require the services of UDT-2 and UDT-4 based at ATB (Amphibious Training Base) Little Creek, Virginia. Each UDT sent to Korea served a six-month tour of duty. UDT-5 was commissioned in September 1951 for service in Korea to allow more time for stateside rest and training for UDT-1 and UDT-3. Reservists, including UDT veterans of World War II, were called up to fill UDT-5's ranks. Although beach surveys and obstacle clearance ahead of amphibious landings remained the standard missions of the UDTs, the unexpected and limited nature of the Korean War gave them the additional tasks of raiding targets offshore, clearing sea mines off the coast, and assisting in the seaborne infiltration of commandos and guerrillas.

Diving gear, weapons, and communications

The weapons and equipment the frogmen used during the Korean War differed very little from what had been issued to them in World War II. They were trained to swim underwater with the aid of rebreathers and aqualungs, but these items of equipment were not used during the Korean War. The frogmen wore tan cotton swimming shorts in the water during summer and donned gray rubber dry exposure suits in the winter.

These two UDT personnel display the long underwear frogmen wore beneath their gray rubber wetsuits to help combat the frigid conditions they encountered while operating during the Korean winter. (National UDT-SEAL Museum)

A typical beach survey would be performed at low tide and involve two frogmen using a flutterboard line, a lead line, and a 3ft and a 5ft post with a flashlight attached to each of them. One frogman would plant the flutterboard line on the shore along with the two posts, which were called range poles. The other frogman would take the other end of the flutterboard line and swim out until one of the range poles was directly above the frogman on the beach, at which point the swimmer would know that he was perpendicular to the shore. The swimmer would then use his lead line to measure the water's depth and record it on his plastic slate at certain intervals until they reached the 3½-fathom curve where the water depth reached 21ft. Both frogmen would then move 50ft in one direction and the swimmer would record the water depth as he moved toward the shore. This process would be repeated until the designated area of the beach was surveyed.

Frogmen swimming offshore limited their personal weapons to Mk 2 KA-BAR knives, .38 revolvers, .45 M1911A1 pistols, and fragmentation grenades. They also had access to small arms such as .30 M1 Garand rifles, .30 M1 carbines, .45 Thompson and M3 "Grease Gun" submachine guns, and .30 Browning Automatic Rifles.

To blow up obstacles and various targets frogmen used the Mk 133 Mod 1 demolition charge, which contained eight 12in blocks of TNT (Trinitrotoluene) cast around a 25ft length of primacord and a flotation

A frogman helps his teammate put on his gray rubber wetsuit while aboard USS *Diachenko* off Wonsan in October 1950. Although the wetsuit insulated the wearer from the cold, water would leak through its back zipper and seams, causing great discomfort. Sealing compounds became an interim solution until improved wetsuits became available in late 1951. (80-G-421436 courtesy of the Naval History and Heritage Command)

bladder to give the charge buoyancy. The Mk 135 demolition charge, which contained ten Mk 20 demolition charges of Composition C-3 plastic explosive, was also used. These charges were connected with primacord to either the Mk 12 or Mk 15 spring-activated firing devices. The Mk 12 could be set for delays of between 5 and 92 seconds, but the delay of 15 minutes to 11 hours offered by the Mk 15 allowed frogmen enough time to leave the target area safely after activating the device. Frogmen also used the Mk 136 demolition outfit with its ten Mk 1 destructors to clear sea mines. A frogman would swim up to a sea mine and attach a destructor with a 10–15-minute delay to one of its horns, so a whole string of sea mines could detonate together once the frogman was at a safe distance.

Frogmen maintained contact with their APD (Transport, High Speed) during operations with radios including the SCR-300, SCR-608, SCR-610, and SCR-619.

An entire UDT complement is given a briefing at the stern of their APD. One APD could carry a complete Underwater Demolition Team of 100 men. (National UDT-SEAL Museum)

Transportation

UDTs operated from five Crosley-class APDs: USS *Diachenko* (APD-123), USS *Horace A. Bass* (APD-124), USS *Wantuck* (APD-125), USS *Begor* (APD-127), and USS *Weiss* (APD-135). Just two UDT platoons were deployed on APDs for six to eight weeks at a time. Each APD was armed with one 5in gun, six 40mm cannon, and eight 20mm cannon and carried two LCVPs (Landing Craft, Vehicle and Personnel) and two LCP(R)s (Landing Craft, Personnel, Ramp). Both types of landing craft were used to deploy frogmen to just off the coastline before they paddled to shore in 16ft-long inflatable rubber LCR(S)s (Landing Craft, Rubber, Small).

An LCP(R) (Landing Craft, Personnel, Ramp) tows a rubber boat containing several frogmen closer toward the Korean coast. The frogmen will then paddle the rest of the way to the shoreline. (National UDT-SEAL Museum)

UDT OPERATIONS IN KOREA

North Korean invasion

The sudden invasion of South Korea by North Korean forces on June 25, 1950 soon led to the intervention of the Eighth US Army, on occupation duty in Japan, to repel them. With the large influx of US Army units entering through the port city of Pusan on the southeast corner of the Korean peninsula, however, it soon became clear that a new port of disembarkation was required to alleviate the bottleneck of incoming soldiers and equipment. On July 10, a survey by two frogmen near the fishing village of Pohang, 70 miles north of Pusan, determined that reinforcements could be landed there. On July 18, 10,000 men of the 1st Cavalry Division were ferried

to Pohang from Japan, and boarded trains that took them to the rapidly approaching front lines.

The relentless advance south by Communist forces led to an urgent need to interdict enemy supply lines. The mountainous spine that runs down the middle of the Korean peninsula was responsible for rail lines being placed near its shores. Supply trains proved remarkably resilient against air strikes and naval bombardment by hiding in railroad tunnels that were carved through the mountains. Rail track was also repaired just hours after being bombed. A successful nighttime raid by sailors and Marines aboard the light cruiser USS *Juneau* (CL-119) against a North Korean railroad tunnel near Tanchon on July 11/12 proved that direct seaborne commando raids against the numerous railroad bridges and tunnels could be effective. UDTs were formally assigned to conduct similar raids even though they were not formally trained or equipped for such commando operations.

A ten-man detachment from UDT-3, already in Japan supporting amphibious training exercises for the Eighth US Army, was assigned to blow up a railroad bridge 45 miles east of the Pusan Perimeter at Yosu. While underway from Sasebo in southwest Japan aboard USS *Diachenko*, the frogmen were quickly trained on how to fire M1928A1 Thompson submachine guns before arriving in the target area under a full moon on the night of August 4/5. The frogmen took an LCVP to 400yd off the beach before paddling an LCR(S) to within 200yd offshore. Two frogmen then swam to the beach and found it suitable for the LCR(S) to follow them in. The bridge selected for demolition was found to be farther inland than expected, however, and was behind a large landfill. A smaller bridge near a railroad tunnel was then chosen as an alternative target, despite a 20ft-high seawall between it and the beach. Before the explosives could be brought over to the bridge, however, ten North Korean soldiers appeared from the tunnel on a railcar and a firefight broke out. The frogmen successfully withdrew under fire with only one of them being wounded. At daybreak USS *Diachenko*'s 5in gun bombarded a nearby railyard and barracks and exchanged fire with North Korean shore batteries before the APD headed back to Japan. The ten-man detachment from UDT-3 was then absorbed by UDT-1, which had just arrived from NAB Coronado aboard USS *Horace A. Bass*.

The Special Operations Group

On August 6, 1950, SOG (Special Operations Group) was formed with 25 men from UDT-1 and 16 men from the 1st Marine Division's Reconnaissance Company, units that had both just arrived in Korea. With SOG operating from aboard USS *Horace A. Bass*, a typical mission saw the APD sail within

A

UDTs IN KOREA – INSHORE OPERATIONS

(1) Frogman, Special Operations Group, eastern Korean coast, August 1950

This frogman wears HBT (Herringbone Twill) fatigues and is carrying a Mk 135 demolition charge and an M1 Thompson submachine gun for self-defense. He has camouflaged his hands and face to help blend in with the darkness while operating ashore.

(2) Frogman, UDT-3, Hungnam Harbor, December 1950

Throughout the Korean War frogmen wore a mixture of uniform items, which gave them a motley appearance. This frogman assisting in the demolition of port facilities exhibits this with an M1943 field jacket and US Marine Corps-issue P44 trousers. He is holding a pair of pliers and a strand of primacord.

(3) Frogman, UDT-1, western Korean coast, February 1951

Frogmen surveyed the South Korean shoreline to obtain up-to-date information about its coastal conditions even during the brutal Korean winters. This frogman wears a mix of US Navy cold-weather gear and is armed with an M1 carbine to guard against any Communist guerrilla attacks on the survey party.

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2–3 miles of the shore before launching LCP(R)s that towed LCR(S)s full of raiders and explosives to 1,000yd off the beach. Scouts would paddle closer to shore and scan the area for any activity, then swim ashore before signaling the rest of the raiding force to follow if the coast was clear. Demolition was the objective and combat was to be avoided. If North Koreans were spotted another target was to be attacked instead. The Marines would form a perimeter around the objective while the frogmen placed their explosives, set to go off in 30 minutes on the target, before the entire raiding party returned to the APD.

During August 12–15 SOG attacked several railroad bridges, tunnel entrances, and rail track along the eastern coast of North Korea from Hamheung to Songjin. USS *Horace A. Bass* also bombarded railroad bridges, factories, and warehouses with its 5in gun. During the SOG attacks, however, it was soon discovered that TNT, 20lb haversacks of Composition C-3 plastic explosive, and primacord were effective against everything except railroad tunnels. Even when SOG blew up an ammunition train inside a tunnel, the structure's open ends just vented out the force of the explosion.

SOG was then assigned to clandestinely survey several alternative landing sites on the western coast of South Korea, in case Inchon proved unsuitable for General Douglas MacArthur's planned amphibious counteroffensive. On the night of August 20/21, USS *Horace A. Bass* arrived off Kunsan, 60 miles south of Inchon, but had to evade a South Korean patrol boat and remain undetected before the SOG team aboard was able to deploy to survey the beach. SOG was also able to survey the beach at Poseungmyeon farther north on the night of August 23/24 without incident. As SOG surveyed another beach near Kunsan on the night of August 24/25, however, it came under fire from North Korean troops who probably spotted the APD, highlighted by the full moon while 5,000yd offshore. One frogman and one Marine were wounded but the frogmen were able to swim with their LCR(S)s back to their LCP(R)s. After returning to their APD it was discovered that nine Marines were still missing, so an LCP(R) returned to the shore and recovered the remaining Marines from the water while under fire. Although the surveyed beaches were never used for amphibious assaults, SOG's survey operations did serve a diversionary purpose for the actual landings at Inchon. SOG would receive a Navy Unit Commendation for a total of six missions (three on each coast) during August 12–25. After existing for less than a month, SOG was disbanded with its frogmen and Recon Marines returning to their respective units.

Inchon

The objectives of the Inchon landings were to cut off the North Korean Army, liberate Seoul, and relieve the pressure on the Pusan Perimeter. When X Corps began its amphibious assault at Inchon on September 15, 1950, however, frogmen did not conduct a preliminary survey of the approaches to Wolmido Island before the US Marines landed and seized it that morning. UDT-1 and UDT-3 did scout the mudflats in front of the seawall before using their LCP(R)s to guide in waves of LVTs (Landing Vehicles, Tracked) carrying the 1st Marine Division toward Inchon proper that afternoon. Afterward UDT-1 marked channels, mudflats, and low points with buoys, disposed of unexploded bombs and sea mines, cleared the harbor of debris and wrecked sampans, and helped repair the gates of the dry dock to keep reinforcements and supplies flowing to support X Corps' drive toward Seoul.

A UDT officer aboard an LCP(R) scans the coast for any potential threats to his frogmen operating on the shore. If necessary he can call in naval gunfire support from their APD, while the machine-gunner will lay down .30-caliber fire as their landing craft rushes to extract the frogmen from danger. (National UDT-SEAL Museum)

Despite the initial success of the Inchon landings, General MacArthur felt his forces were not moving fast enough to cut off the North Korean Army in front of the Pusan Perimeter. He ordered plans to be drawn up for another landing by the 1st Cavalry Division south of Inchon against the rail and road hub at Taejon. Under a bright moon on the night of September 22/23, UDT-3 aboard USS *Horace A. Bass* arrived off Katsupaoi-po to survey the beach for a potential amphibious landing there. One LCVP gathered tide and current data while an LCP(R) towed five LCR(S)s before they were released 400yd off the beach. Ten minutes later, ten frogmen were forced into the water after their LCR(S) was riddled with bullets from small-arms fire. The remaining LCR(S)s quickly withdrew, three of them reaching the LCP(R) while the others made it back to the LCVP. All the frogmen in the water were rescued, three of them having swum all the way back to the APD. USS *Horace A. Bass* and the Royal Canadian Navy destroyer HMCS *Athabaskan* then bombarded the shoreline to silence the enemy gunfire before withdrawing. By then the Eighth US Army had broken out and advanced north from the Pusan Perimeter on September 16, making a landing at Taejon unnecessary.

Wonsan

General MacArthur wanted to cut off the retreat of North Korean forces on the eastern coast of Korea with another amphibious assault by X Corps at Wonsan on October 20, 1950. Wonsan Harbor was 10 miles wide at its mouth and contained nine small islands. The US Navy suspected that sea mines would be encountered, but they were unaware that the Soviet Union had supplied and helped place over 3,000 contact and magnetic sea mines in the harbor. A flotilla of US Navy minesweepers started to clear a 12-mile-long lane through the harbor the day before the South Korean Army liberated Wonsan from inland positions on October 11. The crystal clear water of the harbor and little tidal action allowed a Sikorsky HO3S helicopter from the light cruiser USS *Worcester* (CL-144) and Martin PBM Mariner flying boats to fly ahead of the flotilla and spot any sea mines floating just below the surface.

Frogmen board an LCR(S) they will paddle to shore near the port city of Wonsan in late October 1950. Although Wonsan was liberated by UN forces, its harbor had to be cleared of hundreds of Soviet-supplied sea mines to allow the 1st Marine Division to land. (80-G-421407 courtesy of the Naval History and Heritage Command)

The flotilla of minesweepers faced three outlying islands as they began their sweep: Sin-do to their front, Yo-do on the left, and Ung-do on the right. Frogmen of UDT-3 from USS *Diachenko* searched the latter two islands for cables that would have indicated the presence of electrically detonated sea mines, but none were found. Frogmen operated from LCP(R)s and LCR(S) s to place buoys next to any sea mines they found. Some personnel armed with M1 Garand rifles loaded with armor-piercing rounds attempted to detonate sea mines at a distance, but aiming from a bobbing landing craft at another bobbing object in unsettled water made marksmanship a challenge. On October 12, the minesweepers USS *Pirate* (AM-275) and USS *Pledge* (AM-277) were sunk ten minutes apart by contact sea mines. Frogmen helped rescue over 25 survivors and recovered some of the dead as the two minesweepers sank while under fire from shore batteries on Sin-do. A PBM on patrol covered the rescue effort by calling in carrier air strikes and naval gunfire until the shore batteries were neutralized.

B

UDTs IN KOREA – OFFSHORE OPERATIONS

(1) Frogman, UDT-3, Wonsan Harbor, October 1950

Frogmen wore gray rubber dry exposure suits when the temperature of the dark waters around Korea fell below 60 degrees. When frogmen operated in water 20 degrees and below, ice would form on their noses and eyelids and they had to swim constantly to keep the ice from thickening on the outside of their suits.

(2) Frogman, UDT-5, northeastern Korean coast, July 1952

Operation *Fishnet* saw frogmen cut away fishing nets and demolish sampans to curtail the supply of seafood that fed Communist forces on the peninsula. This frogman could be mistaken for one operating in the Central Pacific against the Japanese less than ten years before.

(3) Officer, UDT-3, northeastern Korean coast, September 1952

This UDT officer aboard an LCP(R) is monitoring the progress of a daylight operation along the coast as his frogmen look for fishing nets. He is keeping a close eye out for any Communist forces and is prepared to call in naval gunfire support and extract the frogmen under fire if necessary.

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A UDT officer briefs his men on a Wonsan beach in October 1950. Their dry suits were not form-fitting so as to allow a layer of warm air to circulate between the body and the suit itself. Any excess air was expelled with a black rubber flapper valve either on the left side of the hood worn or above the chest as shown here. (80-G-421429 courtesy of the Naval History and Heritage Command)

In light of the loss of the two minesweepers, the realization of the scope and scale of the minefield, and with Wonsan already in UN (United Nations) hands, the minesweeping effort became less hurried and more methodical, so as not to put the US Marines in any unnecessary jeopardy. While PBMs and helicopters scouted ahead, frogmen continued to mark and clear sea mines from the water while USS *Diachenko* used its sonar to locate any sea mines just below the surface. It took 15 days to sweep 225 mines to completely clear the lane through Wonsan Harbor. Frogmen then surveyed the landing beaches and placed demolition charges on several sunken wrecks before the US Marines landed on October 26, six days behind schedule. They were greeted at Wonsan by South Korean soldiers, the 1st Marine Air Wing, and a Bob Hope USO (United Service Organizations) show. UDT-3 then sent a detachment of 11 men to survey the beaches at Iwon farther north and found no obstacles before the 7th Infantry Division landed there on October 29. UDT-3 continued to survey beaches and harbor areas, and cleared further wrecks and sea mines around Wonsan and Songjin, until mid-November 1950, when the unit returned to Japan.

Chinnampo

The Eighth US Army's rapid advance north necessitated a closer port on the western coast of Korea to shorten its supply lines. Armed with the experience gained at Wonsan, USS *Horace A. Bass* with UDT-1 aboard,

along with an ad hoc minesweeping flotilla, began to sweep the channel leading to the harbor at Chinnampo on November 2, 1950. Although the exact positions of the lines of sea mines was volunteered by the North Korean boat captains who helped place them, the fast currents and high tides dispersed them in an indiscernible pattern. The muddy water of the channel made the sea mines impossible to spot from the air, but telltale wakes created by the strong currents betrayed their locations. Frogmen operating in LCP(R)s either disarmed the sea mines or placed buoys made out of empty powder cans used for 5in guns next to them, to mark their positions and allow aircraft and minesweepers to clear lanes to the harbor. Despite the onset of the bitter Korean winter, frogmen accounted for 27 of the 80 sea mines destroyed, and had surveyed the approaches to Chinnampo Harbor by the time it was declared open on November 20. The sudden Communist Chinese intervention on November 25 forced the Eighth US Army into a strategic withdrawal south from the Yalu River, however, and US and South Korean soldiers and North Korean civilians were evacuated from Chinnampo before it was abandoned to the advancing Communist Chinese on December 5.

Hungnam

On December 3, 1950, men and materiel of X Corps began to be evacuated from North Korea through the port of Hungnam. Ten days later, ten men from UDT-3 were flown into Hungnam to survey its strategic assets in preparation for their demolition once the evacuation was completed. Naval gunfire along the outskirts of Hungnam and carrier air strikes farther

USS *Begor* sails past the port of Hungnam as it is being demolished in one of the biggest manmade non-nuclear explosions in history on December 24, 1950. (80-G-424297 courtesy of the Naval History and Heritage Command)

inland discouraged the Communist Chinese from launching any major attacks against the city. On December 23, explosives from USS *Begor* were brought ashore and placed in key areas, including dock and port facilities, with the assistance of US Army engineers. Nearly 1,200 Mk 133 and Mk 135 Hagensen packs, 120 Mk 8 explosive hose, 5,000ft of primacord, 7 tons of miscellaneous explosives (including frozen dynamite), hundreds of 1,000lb bombs, and 200 drums of gasoline were used. Primacord had to be strung along the tops of telephone poles to keep the charges out of the way of US Marines, soldiers, and North Korean civilians moving through the city on the way to board their ships. On December 24, just after the last of the 3d Infantry Division had left Hungnam, all the demolitions were connected to trunk lines that led to a single firing point on the seaward side of a breakwater. A flare was fired into the air to signal all the frogmen to assemble there before the charges were electrically detonated and the strategic value of the port was destroyed in one of the biggest manmade non-nuclear explosions in history. The frogmen then embarked on USS *Begor* and sailed south to Pusan.

Kamak Bay

The Korean peninsula is surrounded by a tidal range of 13–27ft of frigid water that is opaque with dirt, preventing frogmen from seeing too far underwater. The majority of the peninsula's rocky beaches have little or no flat areas to land on easily. In January 1951, UDT-1 and UDT-3 were sent to locate and survey areas along the South Korean coast where the water was at least 14–15ft deep to allow LSTs (Landing Ships, Tank) to land, the beach was sturdy enough to support tanks and vehicles, and there were beach exits to allow reinforcements and supplies to move inland. UDT-3 also surveyed several Japanese ports and beaches to facilitate a possible UN withdrawal from South Korea due to the Communist Chinese intervention. Twenty beach surveys were completed by January 19, 1951 when USS *Horace A. Bass* deployed two LCP(R)s and an LCVP carrying frogmen from UDT-1 to conduct surveys of two beaches at Kamak Bay near Popsong-ni on the southwest coast. The frogmen in the LCP(R)s surveyed the southernmost beach without incident, while the LCVP landed four men and two LCR(S)s to survey the northernmost beach.

Just as the beach party was about to return to USS *Horace A. Bass*, ten Communist guerrillas suddenly appeared and opened fire on them. Two frogmen returned fire with a revolver and an M1911A1 pistol before they and the rest of the beach party leapt into the frigid water and started swimming out to sea. The LCVP quickly headed toward the beach, its crew providing what covering fire they could to the swimming frogmen with only an M1 carbine and an M1911A1. One frogman was killed as he reached a towline, while another was killed as he was pulled aboard the LCVP. The LCVP was hit 45 times and two of its crewmen were wounded. An LCP(R) arrived with its .30 machine gun firing on the guerrillas, while USS *Horace A. Bass* fired 34 rounds from its 5in gun 4,000yd offshore, before all UDT-1 personnel were recovered and the APD sailed for Pusan. Although these were the only two UDT fatalities inflicted by hostile action in the Korean War, for the rest of the conflict's duration the frogmen considered the whole coastline of the Korean peninsula as enemy territory. This was underscored on February 16, when a survey party from UDT-3 was fired on by a sniper at Inchon, but none of the frogmen were hit.

The siege of Wonsan

On February 16, 1951, the US Navy began an 861-day maritime siege of Wonsan by maintaining a steady bombardment with naval gunfire and carrier air strikes, the intention being to deny the use of the city's port facilities by the Communists and to keep them on guard against a possible amphibious assault. Wonsan's harbor islands were seized by South Korean marines, and its inner harbor had to be constantly swept for sea mines so its road and rail lines would be within bombardment range of UN ships. North Korean sampans each carried up to four sea mines and under the cover of night and bad weather their crews would replace the sea mines that had been swept by the US Navy. UDTs operated from LCP(R)s not only to help clear sea mines, but also to rescue downed UN pilots from the water while US Navy ships provided gunfire support. HO3S helicopters would scout ahead for sea mines by looking for the telltale shadows they made in the water. Frogmen, in their nondescript LCP(R)s, attracted little fire from shore batteries – unlike the easily identifiable minesweepers. Many of the sea mines encountered were the Soviet contact and magnetic types that were often found covered in marine growth, and connected to cables that allowed other sea mines to be found and marked with buoys. Frogmen would demolish rows of sea mines the same way they demolished beach obstacles in World War II, with Hagensen packs and Mk 15 detonators, set to go off after 90 minutes, placed on each sea mine and connected by primacord to a single trunk line that was kept afloat with flotation bladders. Lines of sea mines would be cleared by either detonating the explosives in them, or by blowing holes in them to sink them to the bottom. Frogmen also disarmed and recovered suspected new types of sea mines so they could be analyzed. This repetitious cycle of North Koreans placing sea mines at Wonsan and the US Navy then sweeping them continued for the rest of the war.

Frogmen aboard an LCP(R) approach a sea mine somewhere in Wonsan Harbor. They will mark it with a buoy so other minesweeping units can destroy or recover it later. (National UDT-SEAL Museum)

CIA-trained and -equipped South Korean guerrillas line up aboard an APD. The APDs had shallow drafts that allowed them to get close to the North Korean coast. Frogmen served as guides to ensure the guerrillas landed safely and undetected. (National UDT-SEAL Museum)

Infiltrating agents and guerrillas

After the front line stabilized roughly along the 38th Parallel in the summer of 1951, truce talks began between UN forces and the Communists that would drag on for over two years at Panmunjom. While UN forces maintained an air campaign and a naval blockade in an attempt to obtain leverage during the negotiations, frogmen supported seaborne raids along the North Korean coast by South Korean guerrillas. The CIA (Central Intelligence Agency) recruited and trained North Korean refugees as agents to gather intelligence, and as guerrillas to attack targets behind Communist lines. Beginning in April 1951, a detachment of frogmen aboard an APD was assigned to infiltrate the agents and guerrillas from their training areas south of Pusan to certain points along the North Korean coast.

A typical infiltration operation would have an APD arrive 5,000–6,000yd off the target beach in an area already swept for sea mines on a moonless night. The APD would launch an LCP(R) containing the CIA-trained agents and guerrillas; the LCP(R) would cruise to within 1,000yd of the beach before launching an LCR(S) that would be paddled to 200–300yd off the landing beach. Two frogmen from the LCR(S) would then swim to shore and check the landing beach for surf conditions and the presence of any obstacles, locals, or sentries. If the coast was unsuitable for landing, the frogmen would return to the LCR(S); what they had discovered would be radioed back to the APD, and the operation would be canceled. If the

coast was clear, however, the frogmen would flash a small light to the LCR(S), which would then signal the LCP(R) to approach to within 800yd of the beach to transfer the agents, guerrillas, and supplies to LCR(S)s that would paddle them to the beach. Other times the LCR(S)s would be towed by LCP(R)s from the APD to the release point. Exfiltration of agents or guerrillas from a beach would involve frogmen aboard an LCR(S) ferrying them to an LCP(R), and then aboard the APD and sailing south by daybreak. These operations continued until hopes of a truce emerged in the spring of 1953.

Operation *Fishnet*

As part of its naval blockade of North Korea, the US Navy conducted an anti-fishing campaign to curtail the amount of seafood that was caught to feed Communist forces. Frogmen directly contributed to this effort in the summer of 1952 with the capture or destruction of fishing nets and sampans from north of Wonsan to Chongjin. Operating from Yang Do Island near Wonsan, UDT-5 aboard USS *Diachenko* launched six Operation *Fishnet* missions along the northeast coast of North Korea from July 23 to August 1, 1952. Operating in LCP(R)s, the frogmen destroyed two fishing nets, and 20 buoys and anchors with explosives. USS *Diachenko*, along with the destroyer USS *Orleck* (DD-886) and two South Korean PT boats in support, fired on targets of opportunity along the shore that resulted in three sampans sunk and five fishermen taken prisoner. During September 21–29, UDT-3 aboard USS *Weiss* carried out nine raids around the port of Odaejin that saw five fishing nets and five sampans destroyed, and the capture of 44 prisoners. UDT involvement in the anti-fishing campaign was planned to continue in 1953, but progress in the truce talks that spring meant plans for further raids were shelved. Frogmen continued to survey several beaches in South Korea, however, and used their demolition skills to assist in the clearing of natural and manmade obstacles from harbors and shorelines until the Korean Armistice Agreement was signed at Panmunjom on July 27, 1953.

BELOW LEFT
Operation *Fishnet* saw frogmen operate along the North Korean coast to curtail the supply of fish as a source of food for Communist forces, in a bid to maintain pressure on them during the truce talks at Panmunjom. (NARA)

BELOW RIGHT
These frogmen are hanging up captured fishing nets to dry aboard a South Korean vessel in the summer of 1952. Fishing nets that were not captured or cut were sunk with explosives. (NARA)

US NAVY UDTs IN THE VIETNAM WAR: ORGANIZATION AND EQUIPMENT

Contingents from UDTs began surveying beaches in South Vietnam in January 1962, as the commitment by the US to fighting the VC insurgency there gradually increased. By the spring of 1963 survey parties from UDT-12 came under frequent VC sniping, but always withdrew safely without suffering any casualties. Individual frogmen were also assigned to the Naval Advisory Detachment at Da Nang to help train South Vietnamese naval commandos. After the Gulf of Tonkin Incident on August 2 and 4, 1964, VC attacks on US installations gradually escalated. The vulnerability of the air base at Da Nang led to the decision to land the 9th Marine Expeditionary Brigade there to protect it. On March 8, 1965, frogmen from UDT-12 surveyed Red Beach II north of Da Nang without locating any obstructions. As the US Marines stepped off their landing craft they were greeted with a handmade sign on the beach that stated "Welcome U.S. Marines UDT 12."

In September 1966, the growing commitment of US forces to South Vietnam resulted in whole UDTs being deployed and rotated in their entirety. Each UDT was made up of four platoons and a headquarters platoon and had a total of 15 officers and 100 men. An entire UDT would be deployed to the western Pacific for a nine-month-long tour of duty, with whole or partial platoons assigned to different detachments that operated simultaneously in-country and offshore. Along with combat assignments in South Vietnam, the UDTs also conducted training exercises in the Philippines and on Okinawa and Taiwan. Frogmen would often serve in one detachment for a month before rotating to another detachment for another month until their tour of duty was complete.

Confusingly, some of these UDT detachments shared the names of SEAL detachments that simultaneously operated in South Vietnam. Detachment Alfa provided administrative support, supply, and training to all the detachments at MCAS (Marine Corps Air Station) Futenma on Okinawa (until June 1968) and at Naval Base Subic Bay in the Philippines; Detachment Bravo surveyed South Vietnamese beaches from ships offshore; Detachment Charlie covertly surveyed South Vietnamese beaches immediately before conducting amphibious operations from specially modified submarines; Detachment Delta was based near Da Nang to support operations in I CTZ (Corps Tactical Zone); and Detachments

Frogmen from UDT-13 set up a command post during a training exercise on an Okinawan beach in 1969. Aside from operating in South Vietnam, frogmen conducted training exercises with allied countries during their tour of duty. (National UDT-SEAL Museum)

Golf and Hotel were formed to assist riverine forces in the Mekong Delta. Detachments Echo and Foxtrot served aboard several ships of ARGs (Amphibious Ready Groups) Alfa and Bravo respectively as they directly supported amphibious operations mounted by US Marines along the coast of South Vietnam.

Even before the Vietnam War the UDTs had more of their officers and enlisted men, if not entire platoons, transferred to the newly formed SEAL teams. As a consequence, keeping UDT platoons at full strength was a constant challenge. As UDT-11, UDT-12, and numerous SEAL platoons rotated in and out of Vietnam, many personnel were transferred back and forth between those units to maintain their ranks at full strength before they were deployed. In July 1968, UDT-13 was established at NAB Coronado to ease the burden of deployment for UDT-11 and UDT-12. Seven officers and 20 enlisted men from UDT-12 formed the nucleus of the new unit, which was also composed of new recruits, naval reservists, and volunteers from UDT-21, UDT-22, and SEAL Team 1. UDT-13 first arrived in theater in March 1969 for two tours of duty, before disbanding in December 1970. In January 1969, the Fifth Platoon, made up of two officers and 20 enlisted men from UDT-21, was formed at ATB Little Creek to serve in Vietnam from March to August 1969, before being disbanded the following October. The UDTs lost 12 men killed in action during the Vietnam War.

Diving gear, weapons, and ordnance

The scuba gear used by frogmen, such as dive masks, aqualungs, and air tanks, was manufactured from materials and coatings designed to make them resistant to magnetization. This was necessary so as to avoid triggering any magnetic sea mines frogmen might have to disarm. They used open-circuit scuba gear that featured two air tanks made of spun aluminum, each weighing 90lb when fully charged. A pair of these air tanks were mounted on two large aluminum strips attached to a black nylon harness that was worn on each frogman's back. Frogmen breathed from the air tanks courtesy of an Aqua-Lung DA (Demand Apparatus) Aqua-Master regulator that caused bubbles to float up and leave a trail on the surface. Frogmen swimming in the Mekong Delta found its warm brown water as clear and transparent as coffee, and they occasionally had to empty the dive masks they were wearing due to the amount of sweat dripping off their faces.

Frogmen used either amber or black rubber Swim Master Duck Feet UDT Model swim fins for underwater transit. When operating near water, they used the Life Preserver, Yoke made of gray rubber material that was worn under their web gear and equipment. The life preserver could be inflated with a CO_2 cartridge on its upper left-hand side or with an oral inflation tube instead.

Frogmen were issued the Mk 2 KA-BAR knife for use as a cutting tool or as a close-combat weapon if necessary. For personal protection, frogmen were issued Smith & Wesson .38 K-38 revolvers; these were replaced by Smith & Wesson 9mm semiautomatics in 1966. Frogmen also armed themselves with Ithaca Model 37 12-gauge shotguns, .45 M3A1 "Grease Gun" submachine guns, 5.56mm AR-15, CAR-15, and M16 rifles, M79 grenade launchers, and 7.62mm M60 machine guns.

For the demolition of natural and manmade obstacles along with VC infrastructure, the Mk 133 Mod 2 demolition charge with eight 12in blocks of HBX (High Blast Explosive) and the Mk 137 demolition charge with

ten Mk 34 Mod 1 charges of Composition C-4 plastic explosive were used. For extensive demolition work such as clearing canals, frogmen would use Mk 8 explosive hose that contained 50lb of Composition A-3 granular explosive and aluminum powder. Made of strong rubber fabric, the Mk 8 explosive hose was 25ft long, 2½in in diameter, and weighed 150lb. One method used to render VC bunkers uninhabitable was to place bags of powdered CS gas (which had the same effect as tear gas) inside them on top of a sock full of Composition C-4 plastic explosive. A long fuse attached to the explosive allowed enough time for a quick retreat upwind to avoid the uncomfortable aftereffects.

Transportation

For beach-survey missions, frogmen used the 12ft-long, 6ft-wide, 289lb IBS (Inflatable Boat, Small), which could carry up to seven men and 1,000lb of equipment. An attached cylinder of CO_2 allowed the IBS to fill up rapidly with air, meaning it could be deployed by submarine or parachute. A towing bridle allowed the IBS to be towed at speeds of no more than six knots by a landing craft or the periscope of a submarine. A mount to accommodate a 7.5hp outboard motor was located at the stern of the IBS, but the motor could only withstand being submerged for 10 seconds and required delicate handling; and it was easily damaged by the presence of water in the gasoline or use of an improper fuel-to-oil ratio. Frogmen preferred the quieter and more convenient wooden paddle to propel the IBS.

Late in the Vietnam War, a dedicated platoon within a UDT operated two General Dynamics Convair SDVs (Swimmer Delivery Vehicles) for covert beach surveys and other clandestine missions. The SDV Mk VII Mod 6 was a 2,200lb submersible that measured 18½ft long, nearly 3ft wide, and 5ft high. Its 1.83hp DC motor was powered by six 24-volt silver-zinc batteries that gave it a speed up to four knots for up to eight hours. The SDV was composed of a fiberglass hull and alloys lacking iron, thereby reducing its acoustic and magnetic signature. A buoyancy tank in the center of the SDV could be filled and emptied of water to adjust its depth down to its limit of 500ft. The air in the buoyancy tank was blown into a storage tank to prevent any bubbles from reaching the surface. The SDV was equipped with a gyrocompass, sonar transducers, and a depth recorder in dry airtight containers. The cockpit carried a UDT pilot in the front with a navigator seated behind him. The rear compartment held two passengers, one behind the other, who faced toward the stern. A sliding canopy without windows covered each compartment to prevent any light from being seen from above the surface. The SDV's internal air supply could sustain four men for two hours. An additional eight aluminum scuba bottles were placed on top

RIGHT
The former Regulus I nuclear cruise missile hangar attached to the deck of USS *Tunny* was modified to accommodate an entire UDT platoon along with six IBSs or two SDVs. Bunks could only be placed straight down the middle because that was the only part of the hangar high enough to accommodate them. The limited amount of space forced the frogmen to store their equipment either along the deck or the bulkhead, or hang it off their bunks. (Courtesy of Emily Dillon)

FAR RIGHT
An SDV being pushed into one of the former missile hangars aboard USS *Grayback*. The SDV's pilot and navigator each wore scuba gear plus an extra depth gauge and compass in case any of the SDV's instruments failed. (United States Navy)

of the battery compartment to allow the crew to breathe for up to three more hours so they could use their personal oxygen tanks for swimming outside the vehicle. Traveling aboard the SDV was dark and cold with little opportunity to move around to maintain body heat.

UDT OPERATIONS IN VIETNAM

Detachment Bravo – overt beach surveys

Detachment Bravo was composed of two officers and 18 enlisted men who surveyed from the 21ft-deep fathom curve offshore to the high-water mark on selected beaches along the South Vietnamese coast from the DMZ

A frogman with a CAR-15 rifle keeps watch during a daylight survey of a South Vietnamese beach. Note the Mk 13 Mod 0 marine illumination flare taped to the scabbard of his KA-BAR knife. His swim fins are carried on his back for easy access in case the survey party has to swim out from the beach in a hurry. (National UDT-SEAL Museum)

(Demilitarized Zone) to the Cambodian border. The frogmen measured the water depth, checked for obstacles, and noted the types of gradient on the beach and under the water to update the coastal and oceanographic charts, and to determine the suitability of the beach for amphibious landings. A typical survey would take five hours, beginning at first light in clear, 85-degree water. The frogmen would arrive 500yd off the beach in an LCP(L) (Landing Craft, Personnel, Large) with an IBS attached to the side of it to drop off a pair of swimmers every 25yd. One frogman, with a nylon string with a lead weight at the end called a leadline, would drop its heavy end until it hit bottom 21ft below. From there, the two frogmen would swim toward the beach and stop at specific intervals to record the depth, current, gradient of the seafloor, plus any natural or manmade underwater obstacles on a Plexiglas slate with a lead pencil. How much weight a particular beach could bear and the number of exits that led to the hinterland would also be noted. A reverse method would have two frogmen each place and hold a range pole on a given compass bearing that was perpendicular to the shoreline. The shorter range pole would be placed in front of the longer one and would have a different colored flag (or a red light in low light conditions) on the top of it to make it easier for the swimmer heading away from the shore to see. The swimmer would take a sounding at the particular point where the range poles lined up. The frogman holding the range poles would then move 25yd down the beach and the process would be repeated until the survey was finished.

These daytime surveys were supported by US Navy ships offshore, and sometimes by small detachments on the beach from nearby South Vietnamese or US Army units. Despite efforts to obtain intelligence on VC activities in the survey area, the frogmen often operated without knowing the local strength or intentions of VC forces. Usually the only security on the beach was provided by a pair of frogmen armed with M16s and M79s and positioned on both flanks of the survey party, who would return fire and quickly form a defensive perimeter if attacked by the VC. Frogmen were encouraged to withdraw rather than make a stand so as not to jeopardize their special skills in insignificant firefights with the VC. While they swam out to their LCP(L), its .50 heavy machine guns provided covering fire. Once the survey party had been recovered, their LCP(L) would return them to their APD and wait for the VC to be neutralized before returning to complete the survey.

C **UDTs IN VIETNAM – EARLY OPERATIONS**

(1) Frogman, UDT-12, beaches near Da Nang, March 1965
This frogman has just finished surveying the beaches near Da Nang ahead of the US Marine Corps landing there. His blue dive shirt was reversible to yellow and could be used for signaling if necessary.

(2) Frogman, UDT-12, south of the DMZ, September 1966
Supporting a US Marine Corps landing to clear out any VC along the coast, this frogman is wearing an OG-107 jacket with tan swim shorts.

(3) Frogman, Detachment Delta, Da Nang, June 1967
This frogman wearing a complete OG-107 uniform is exhibiting two of the demolition charges used to clear natural and manmade obstacles. The Mk 135 demolition charge at his side held ten blocks of C-4 plastic explosive while one large pocket on its back held a flotation bladder to allow it to be towed across the water. The 40lb M3 shaped charge on his left contained Composition B explosive that penetrated the toughest of materials. It was often used in conjunction with Mk 8 explosive hose to clear waterways of sandbars, collapsed bridges, and VC-made obstacles.

(4) UDT shoulder patch, UDT-11
This patch was worn on the left shoulder. Each UDT had their respective unit designation listed below the patch.

(5) UDT subdued patch, UDT-13
A subdued version of the UDT patch was sometimes worn on the lower leg of the swim shorts.

(6) LDNN patch
This patch was worn by those who served as advisors to the LDNN.

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These two frogmen on a South Vietnamese beach are holding flags while a swimmer on the left moves into position until he is lined up with them. The swimmer will then note the depth, gradient, and any obstacles encountered beneath the waves in 25yd increments. (Courtesy of Emily Dillon)

Detachment Charlie – covert beach surveys

The two officers and 18 enlisted men of Detachment Charlie were assigned to survey, at night, designated landing beaches in South Vietnam to ensure there were no obstacles or unforeseen circumstances that might jeopardize imminent amphibious operations. These surveys were conducted from submerged US Navy submarines to avoid alerting local VC forces that a landing by US Marines was coming. The capability of the frogmen to operate from a submarine was also a secret that had to be maintained, which prevented any coordination with local forces. Although the information gathered by Detachment Charlie was less accurate and complete than that of the beach surveys conducted by Detachment Bravo, enough relevant data was gathered to warrant a successful operation; but equipment problems, along with the presence of minefields, friendly forces, VC, or civilians around the designated beaches led to the postponement or cancellation of many of these operations. Detachment Charlie operated aboard USS *Perch* (APSS-313) until September 1966, and USS *Tunny* (APSS/LPSS-282) until the spring of 1969. After both submarines were decommissioned Detachment Charlie was briefly disbanded, until USS *Grayback* (LPSS-574) was placed back into service after being refitted as an amphibious transport submarine.

It was necessary for frogmen from Detachment Charlie to dwell for several hours in low light conditions aboard the submarine before a mission to maintain their night vision. Depending on the weather and the local situation, they would deploy with their IBSs from the submarine while on the surface or submerged. Deflated IBSs would be stored in lockers built inside the superstructure of the submarine that would allow them to be accessed from the outside. Three frogmen at a time would exit the submerged submarine via its escape trunk in the forward torpedo room. The frogmen would swim upward with the help of an ascending line, while simultaneously their IBSs would be inflated underwater and bob to the surface where they would be secured to the submarine's periscope. Radio clicks and red lights flashed from the periscope helped guide the

frogmen to and from the submarine. Saltwater-activated Burnett Pingers attached to the IBSs allowed them to be detected by the passive sonar of the submarine up to 4,400yd away. Weighing 4oz and measuring 1½×3in, these electronic devices were powered by a 4-volt mercury battery and emitted high-frequency pings every 2–3 seconds for up to 30 hours down to a depth of 200ft. The Pingers operated more effectively the deeper they were, so frogmen attached a cluster of at least two Pingers to each IBS with an 8–25ft line weighted at its end. Unfortunately, natural obstructions such as sandbars blocked the signal from the Pingers when they got between an IBS and the submarine.

A pair of IBSs would motor away from the submarine until they got close to shore and then be paddled to within 300m (328yd) of the beach. The IBSs would then be anchored and the security detail and beach party would swim ashore with a flutterboard line several hundred meters long connected to one of the IBSs floating offshore. Swimmers would grab hold of the flutterboard line at a knot tied at 25m (27yd) intervals up to 200m (219yd) from the beach. Instead of colored flags, the beach party would have a pair of flashlights, one above the other, each with a cone-shaped attachment with a thin red lens designed to keep the light visible only from straight ahead. When the red light was switched off, the swimmers would take a sounding and feel for any obstacles below them. The beach party would then move 25yd down the beach and the process would repeat itself until the mission was completed. If a quick recovery was necessary, the submarine would use its periscope to drag two IBSs with a rope strung between them. A submarine could also surface directly below an IBS and recover everyone directly onto its deck.

USS *Tunny* was the first submarine to deploy SDVs off South Vietnam in January 1969, to mount clandestine surveys of the underwater approaches to specific beaches. USS *Tunny* carried two SDVs in its hangar and would secure them to its deck with chains before diving to deploy them underwater. An active Pinger would be left on the aft deck of USS *Tunny* for 10 minutes in case an SDV needed to return immediately. A row of Pingers dropped at certain intervals by an SDV allowed it to follow the trail back toward the submarine.

For distances greater than 4,000yd, a Naval Acoustic Electromechanical Beacon aboard the SDV allowed it to be tracked past 14,000yd, but the beacon could only be used sparingly because its saltwater battery lasted just 30 minutes. Brief signals from the beacon would notify USS *Tunny* of objectives being met, while one continuous signal indicated an emergency. The SDV would set down up to 30ft below the surface and the swimmers would deploy toward the shore to conduct a survey. One frogman would hold a Plexiglas tube with a clock mechanism inside that had a heavy latex material applied to it at one end. Water pressure would push the latex end in or out depending on the depth. A stylus connected to the latex marked a piece of paper with a black line that represented the gradient of the ocean floor. By recording the depth of the device when it was first turned on, an accurate measurement of the depth could be recorded as the frogman swam toward shore. A reel of fishing line kept the swimmers connected to the SDV and would pull them in once they began their return to the SDV. A half hour before the SDV was due to return, another Pinger was activated on the deck of USS *Tunny* and the SDV would be secured before its crew reentered the submarine.

Detachments Delta, Golf, and Hotel – UDT in-country

The first contingent of frogmen to be stationed in South Vietnam was Detachment Delta when it was assigned to Naval Support Activity, Da Nang in the spring of 1965. Its base at Camp Tein Sha was nicknamed "Frogsville" as several UDT detachments were stationed there throughout the war. Detachment Delta supported riverine operations by demolishing any natural and manmade obstacles, plus any VC infrastructure encountered in I CTZ. Beginning in September 1968, frogmen helped recover pilotless reconnaissance drones that fell into the Gulf of Tonkin after flying over North Vietnam. Detachments Golf (two officers and ten men) and Hotel (one officer and nine men) were established in January and July 1968 respectively, to support the Mobile Riverine Force operating in the Mekong Delta. In December 1968, Detachment India was temporarily established with frogmen from Detachments Bravo, Golf, and Hotel for an operation to sweep the Ca Mau River. Detachment India captured a great quantity of VC supplies and documents and a large amount of supplies and infrastructure was demolished. Detachments Delta and Hotel traded operational areas in July 1969 as the policy of "Vietnamization" saw US forces gradually withdraw from South Vietnam. Frogmen operated in-country until Detachment Golf concluded its deployment to South Vietnam on June 30, 1971.

Small contingents of frogmen operated alongside local South Vietnamese forces as they conducted daylight sweeps along rivers and canals. They demolished VC bunkers, base camps, and supply caches, along with dams and collapsed bridges that obstructed rivers, streams, and canals. They also accompanied riverine craft and SEAL units on missions that required their demolition skills. Frogmen garnered the respect of riverine sailors by manning machine guns, rescuing men from the water, and supervising medevac operations. They inspected the hulls of riverine craft below the waterline for limpet mines, assessed damage, and disentangled foliage and fishing nets from their screws. When riverine forces came under fire, frogmen would accompany the landing force to help rout the VC or call in fire support. When patrol boats hid along riverbanks at night to ambush passing VC sampans, frogmen established security perimeters several yards inland to guard against surprise attack. Frogmen also salvaged sunken boats and helicopters and retrieved bodies, weaponry, ordnance, and equipment.

RIGHT
With his M16 rifle within easy reach to his right, a frogman prepares several blocks of Composition C-4 plastic explosive to demolish a VC bunker along a waterway in the Mekong Delta. Note how he is wearing his bandoleer as an ammunition belt. (United States Navy)

FAR RIGHT
A frogman places explosives on a VC-made water obstacle designed to restrict river access and facilitate ambushes on riverine craft. The brown water of the Mekong Delta was warm and cloudy, which made demolition and salvage operations challenging. (NARA)

PCF-43

On April 12, 1969, a column of eight PCFs (Patrol Craft Fast) passed through a thick mangrove swamp along the Duong Keo River occupied by 75 VC hidden in bunkers, trenches, and spider holes. The VC began an ambush with a Claymore mine aimed at PCF-5, the lead craft, followed by machine-gun, recoilless-rifle, rocket, and small-arms fire. The first seven PCFs were hit, and they quickly raced out of danger to establish a quick perimeter downstream to evacuate their casualties. PCF-43, with ten Detachment Golf frogmen and 800lb of explosives aboard, was the last PCF in line and suffered the full brunt of VC fire. B-40 rocket hits on its fantail and pilot house forced PCF-43 to run up onto the northern bank of the river and flop onto its starboard side in front of some VC positions. The surviving crewmen and frogmen quickly formed a defensive perimeter around the beached craft and held off the VC for 40 minutes with M16s, M79s, grenades, and an M60 salvaged from PCF-43. Two US Navy Bell UH-1 Huey helicopters of HAL-3 provided close air support while PCF-38 was forced to withdraw while trying to rescue the stranded crew of PCF-43 after a B-40 rocket hit its pilot house. PCF-5 and PCF-31

UDTs also operated in the Mekong Delta aboard various riverine craft. They demolished manmade and natural obstacles to keep the waterways clear. Several frogmen are shown here aboard PCF-71. Note the nylon cargo net at its bow to allow easy access to the craft from the shore. (Naval History & Heritage Command USN 1142661)

then unleashed enough firepower along the shoreline to allow PCF-31 to take PCF-43's survivors and dead to the evacuation point downriver. Only three of PCF-43's 17 crewmen were left unscathed, while one frogman was killed and six were wounded. Shortly after its crew was rescued, PCF-43 was obliterated in an immense explosion after its two overheated diesel engines ignited the remaining fuel aboard and detonated the explosives.

Operation *Deep Channel II*

Frogmen also used explosives to create new waterways to ease the transit of riverine forces and commercial access between villages and towns for the local population. One critical area of the Mekong Delta that remained inaccessible to patrol craft was in the Plain of Reeds, 56km (35 miles) northwest of Saigon between the Song Vam Co and Song Vam Co Dong rivers. This area was penetrated by the "Parrot's Beak" salient that extended from southeast Cambodia and contained numerous depots and rest areas for the VC and the NVA (North Vietnamese Army). The Kinh Bobo Canal served as a direct infiltration route from the "Parrot's Beak" to within 16km (10 miles) of Saigon. In October 1969, Operation *Deep Channel I* had Detachment Delta determine that a 9km (5½-mile) extension of the Kinh Gay Canal would cut across the Kinh Bobo Canal and connect the Song Vam Co and Song Vam Co Dong rivers. Despite the risk of another North Vietnamese offensive in the Tet holiday season, it was decided that the extension could be blown with explosives in less time and at less expense than by dredging.

On January 6, 1970, Operation *Deep Channel II* commenced with 22 men from UDT-12 operating completely exposed in a wide-open area with deep mud a short distance from the Cambodian border. This operation would eventually consume 60 percent of the world's supply of Mk 8 explosive hose with nearly all of it shipped in from the United States. For safety reasons, Lockheed C-130 Hercules transports flew in only a three-day supply of explosive hose at a time to the advanced tactical support base at Tuyen Nhon. An LCM-8 (Landing Craft, Mechanized) was initially used to deliver explosive hose to the blasting area, until that craft was replaced by an LCM-6 that was better able to travel down the newly blasted sections of the canal. The explosive hose was then unloaded and moved, with the assistance of South Vietnamese soldiers and villagers, in exchange for the wooden crates it was shipped in. The frogmen then prepared the explosive hose by coupling three or five of them together

D

UDTs IN VIETNAM – LATER OPERATIONS

(1) Frogman, Detachment Charlie, USS *Tunny*, October 1968

Up to three frogmen at a time with two air tanks each could exit a submerged submarine through its escape trunk. The flood valve would fill the trunk up to their necks with seawater before the air valve pressurized the trunk until it was equal to the sea pressure outside. The outside hatch to the trunk would then swing open, allowing the frogmen to leave the submarine.

(2) Frogman, Detachment India, Cau Mau Peninsula, January 1969

Easily mistaken for a SEAL at first glance, this frogman is part of a daylight sweep searching for VC base camps and supply caches along a river. He carries the magazines for his M16 in a World War II-era Browning Automatic Rifle ammunition belt.

(3) Frogman, Detachment Delta, Kinh Gay, February 1970

This frogman is carrying a Mk 8 explosive hose to the location where it will be assembled with two others into an elongated pyramid. The pyramid will then be floated down to the demolition area and help blow one section of earth at a time to extend a waterway to enable riverine craft to patrol the area. His yellow dive shirt is the reverse side of the blue dive shirt.

(4) Silver UDT breast insignia

On October 16, 1970, the UDT breast insignia was authorized for frogmen to wear on their service dress uniforms. It was silver with a vertical naval anchor at the center with a horizontal Neptune trident behind it. A flintlock pistol at an angle was placed before the anchor. This insignia lasted only a few years before frogmen were authorized to wear the Naval Special Warfare uniform breast insignia instead.

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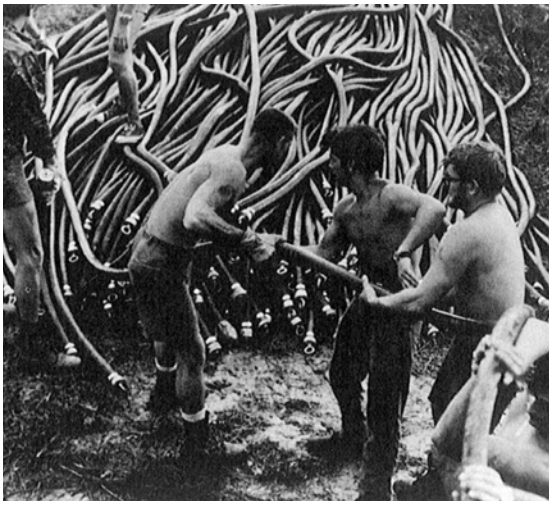

ABOVE LEFT
A UDT prepares Mk 8 explosive hose, effective in clearing manmade or natural obstacles in waterways, for a large demolition job. Large quantities of explosive hose were used during Operation *Deep Channel II* in 1970. (United States Navy)

ABOVE RIGHT
One overlooked aspect of the Vietnam War was the number of amphibious landings conducted by US Marines along the South Vietnamese coast to sweep those areas of VC forces. With their role in scouting a beach completed, these frogmen enjoy their rations with their equipment stacked neatly before them. (NARA)

into a pyramid-shaped charge. These 750lb charges were then floated or towed to their proper position on top of air mattresses or rubber boats, until five of them were placed into the ground and linked together with primacord, and electrically detonated. Five of these prepared charges blew sections 5ft deep and 25ft wide at an average length of 750–1,000ft per day. Wider areas every 1,000ft were blown to allow patrol boats to turn around. One challenge arose when soft spots of decayed vegetation absorbed the initial blast rather than being dispersed by it. Late in the operation, helicopters accelerated progress by delivering crates of explosive hose to Tuyen Nhon, and from there the prepared explosives were transported directly to the blasting area in slung cargo nets. By the time the extension was complete on February 13, over 6,200 lengths – equaling 230 tons – of explosive hose had been used in one of the largest demolition jobs in US naval history.

Detachments Echo and Foxtrot – The Amphibious Ready Groups

ARGs Alfa and Bravo, composed of US Marines and their support units, independently conducted numerous seaborne landings all along the South Vietnamese coast in an attempt to eliminate VC enclaves. Detachment Echo was assigned to ARG Alfa, while Detachment Foxtrot supported operations by ARG Bravo. Each detachment had one officer and ten men who surveyed the landing beaches from landing craft, before it was discovered that PCFs were more effective in deploying and recovering frogmen clandestinely ahead of the amphibious assault. Frogmen also served as safety swimmers, and patrolled the boat lanes to the beachhead that they had marked with buoys. They went ashore to demolish any VC infrastructure encountered. Detachments Echo and Foxtrot were not in action as often as their fellow detachments in South Vietnam, however, and would often be prepared in anticipation for operations that did not develop. Frogmen spent weeks at a time between operations constantly training aboard their APD, and helped its crew with underwater maintenance. As the US policy of "Vietnamization" commenced, amphibious operations were curtailed and both detachments were transferred to Da Nang in April 1969. Although they would still sail with their respective ARG to conduct the occasional beach survey, both detachments spent most of their time assisting Detachment Hotel with its operations along the Cua Dai River in I CTZ.

US NAVY SEALS IN THE VIETNAM WAR: ORGANIZATION AND EQUIPMENT

No more than 120 SEALs served in South Vietnam at any one time. The majority of them operated in Detachments Golf or Alfa, which were composed of platoons from SEAL Teams 1 and 2 respectively. SEAL Team 1 had a wartime peak of 53 officers and 255 enlisted men in 22 platoons, designated Alfa, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, Juliet, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Victor, Whiskey, X-Ray, Yankee, and Zulu. SEAL Team 2 would peak at 23 officers and 115 men in nine platoons, designated Second to Tenth. SEAL Team 1 lost 34 men killed, while SEAL Team 2 lost nine men killed in action. SEAL Team 1 received one Presidential Unit Citation while SEAL Team 2 received two; all three SEALs that received the Congressional Medal of Honor were from SEAL Team 1.

A SEAL platoon was a self-reliant unit containing men who were experts in ordnance, intelligence, and communications. Each platoon initially deployed with two officers and ten enlisted men, but combat experience soon led to an increase to two officers and 12 enlisted men, divided into two squads of seven men each. Another enlisted man was added later to serve as a PRU (Provisional Reconnaissance Unit) advisor without breaking up the integrity of the SEAL squad. Detachments Golf and Alfa each had three SEAL platoons assigned to them at any one time in staggered, separate, and temporary six-month tours of duty. The deployments of platoons would briefly overlap when part or all of an outgoing platoon would orientate their replacement platoon to their operational area for two weeks before rotating out. Once home, the SEALs would incorporate their knowledge and experience into their training programs.

To address serious medical situations during combat operations, a US Navy hospital corpsman was assigned to every SEAL platoon sent to South Vietnam. Owing to their much-needed medical skills, corpsmen were trained just enough to ensure they were physically and mentally qualified in the unconventional nature of SEAL operations. Corpsmen who joined the SEALs were not trained in demolitions or go through "Hell Week," but they were instructed in diving, parachuting, patrolling, tactical combat, and the operation of small arms. Corpsmen who did not go through such conditioning were often found wanting. On SEAL operations, corpsmen wore similar uniforms to the SEALs and were fully armed like their squad mates. Along with the radioman, the corpsman was always first in and first out on operations to ensure there was always communications and medical aid available as precautions. When not on operations, corpsmen would visit local villages to provide medical care, which helped them garner useful intelligence as they won the hearts and minds of the villagers.

SEAL Team 2 first deployed dogs to South Vietnam in 1967; their sense of smell and sensitive hearing were used to detect arms caches, booby traps, and other humans. Dogs were used when conducting ambushes because they could detect someone coming toward the SEALs several minutes before anyone else. The SEALs would watch for their dogs' ears to come up before they froze, their nose pointing in the direction from which people were approaching. German Shepherds were the primary breed used and

intimidated the VC as they were far larger than the average dogs found in Southeast Asia. It was discovered that dogs worked best with the SEALs in the dry season, as their legs were not long enough for them to move fast through deep mud.

Weapons and ordnance

Owing to the confining jungle environment the SEALs operated in, firepower was more important than range, because most of their engagements with the VC occurred at an average distance of 30m (33yd). Each SEAL platoon was responsible for their own arsenal that accompanied them on each of their tours of duty. They maintained their weapons zealously due to the salty air and damp and corrosive jungle environment in which they operated. Each SEAL was allowed to choose which weapon to use on an operation as long as it helped their squad accomplish the mission and ensure fire superiority. Any ammunition, grenades, and other ordnance unused after three operations were disposed of to avoid misfires and malfunctions.

The amount of firepower a SEAL squad possessed, along with the element of surprise, discipline, and skill was not always enough to defeat larger units of VC in open combat, however. The distinct sounds of M16s and Stoner 63A1s firing, along with their distinctive red tracers streaking through the night, were beacons that could attract more nearby VC units than the SEALs wanted to deal with. If neutralization of the VC was not possible, they were suppressed just long enough for the SEALs to call in close air support and extraction.

The primary rifle used by the SEALs was the M16, the light weight and high rate of fire of which made it ideal for close-range firefights. Although the 5.56mm rounds it fired lacked serious stopping power, an automatic burst often hit a vital organ that stopped a VC in his tracks. Its shorter XM177E1, XM177E2, and CAR-15 variants were popular with patrol leaders and radiomen, who enjoyed the greater freedom of movement these weapons offered in the dense vegetation. The Stoner 63A1 (officially designated as the Mk 23 Mod 0) also delivered 5.56mm rounds, either as a single-shot carbine that fired from the closed-bolt position, or as a light machine gun with a high rate of fire from the open-bolt position. Each SEAL squad attempted to have at least two Stoners on every mission, but three were preferred since they alone offered as much firepower as a standard infantry company. Stoners were used to lay down suppressive fire while the rest of the members of the SEAL squad were extracted from the area. The SEALs used modified M60 machine guns to deliver heavier 7.62mm rounds with their greater penetrating power through the thick jungle growth.

SEALs used the Ithaca Model 37 12-gauge pump-action shotgun because of its stopping power at short range. The shotguns were modified to hold seven shells, and a 4in V-shaped "duckbill" extension was fitted to the end of the barrel, with upper and lower halves that altered the shot spread from a 44in circular pattern to an oval pattern 96in wide and 24in high. The Remington 7188 12-gauge select-fire shotgun was also used, but the large ejection port on the right side made it all too easy for dirt and saltwater to enter the weapon, causing it to malfunction frequently. Shotgun shells used included the XM162, which held nine 00 buckshot pellets, and the XM257, with 27 #4 buckshot pellets. Shotguns without the "duckbill" extension attached also fired shells filled with tear gas and colored flares.

SEALs armed with the M79 grenade launcher fired 40mm high explosive, illumination, white phosphorus, tear gas, flechette, and buckshot rounds.

The SEAL in the center is armed with an M16 rifle with an XM148 grenade launcher attached. A SEAL was able to keep his hand on the grip of the M16 and just move his trigger finger to fire a 40mm grenade. The exposed sear lever located at the rear of the receiver would cause a cocked XM148 to fire when pressed, meaning a SEAL could thus fire the XM148 with his left thumb while still firing rifle rounds with his right trigger finger. (National UDT-SEAL Museum)

The single-shot nature of the M79 was a disadvantage in a firefight, however, so it was supplemented and gradually replaced by the XM148 grenade launcher, which was designed to be fitted underneath the barrel of the M16 family of rifles and carbines. The lack of a trigger guard, however, made the XM148 vulnerable to jamming or premature firing, and it also had a few protruding pieces that could snag on foliage or break off entirely. The M203 pump-action grenade launcher later appeared; it fired 40mm grenades from underneath the M16's barrel with the same range as the XM148.

Although the M72 LAW was designed as a light anti-tank weapon, the SEALs employed it as portable light artillery. With a kill radius of 15m (49ft), its 66mm rocket could penetrate 78in of log and earthen bunkers up to a range of 325m (355yd). The SEALs fired the rockets into the trees above to shower the VC with an explosive airburst so as to break contact and withdraw safely.

The M18A1 Claymore anti-personnel mine was used with deadly effect to initiate SEAL ambushes. Just over 1lb of C-4 plastic explosive propelled 800 steel ball bearings in a 60-degree arc 160m (175yd) wide and 7m (23ft) high that tore up anything for up to 150m (164yd). The Claymore could be fired with a tripwire or an M57 firing generator connected to a firing wire up to 30m (33yd) away. The M57 was called a "clacker" because it made a loud "clack" sound when it was squeezed. SEALs initially used the classic Mk 2 "pineapple" grenade, which contained 2oz of flaked TNT that had an 18m (20yd) casualty radius. The Mk 2s were gradually replaced by the M26 fragmentation grenade, which contained 5½oz of Composition B explosive surrounded by a roll of notched-square wire that dispersed hundreds of small rectangular metal pieces with a 27m (30yd) casualty radius. The MK3A2 concussion grenade, made up of a cardboard tube with ½lb of TNT, had

In the foreground a SEAL poses with a modified M60 machine gun while his teammate holds a Stoner 63A1. The M60 itself was not much heavier than the Stoner 63A1, but the 7.62mm round the M60 fired was three times heavier than the 5.56mm round fired by the Stoner. The "Stonerman" carried up to 1,200 rounds of ammunition, but his weapon's high rate of fire required that it be fired in short bursts to prevent its barrel from overheating and warping. The Stonerman also carried empty sandbags to collect all the spent links because they were of a unique design and in limited supply. (National UDT-SEAL Museum)

a casualty radius of only 2m (6½ft), but provided a less lethal method of driving VC out of confined spaces and from under water. The M18 smoke and M25A2 tear gas grenades were also effective and less dangerous against bunkers, by forcing the VC to leave without detonating any munitions that might also have been inside.

To destroy VC infrastructure such as hooches and supply caches, AN-M14 TH3 incendiary and M15 or M34 white phosphorus grenades were initially used, but none were effective in the rain-soaked jungle. The SEALs instead used the Mk 13 day/night flare because it burned hot enough to consume wet materials; 2lb blocks of C-4 plastic explosive with delayed fuses were also employed. For larger targets, the SEALs used the Mk 133 Mod 2 demolition charge or the Mk 137 demolition charge. In free-fire zones the SEALs used their own booby traps, such as grenades with their pins removed and placed under dead VC. A 308-G ADD (Anti-Disturbance Device) screwed into an M26 grenade or a Claymore mine would detonate the booby traps with the slightest disturbance. SEALs also left behind military gear filled with C-4 plastic explosive for the VC to find. SEALs added to the enemy's anxiety by leaving modified 7.62mm ammunition and 82mm mortar rounds in VC supply caches that exploded when fired. Enough VC were killed or maimed for their comrades to mistrust their ammunition.

The 9mm Smith & Wesson Mk 22 Mod 0 silenced pistol was a modified 9mm Model 39 semiautomatic pistol nicknamed the "Hush Puppy" for its alleged ability to kill sentry dogs or any other noisy animals at a distance. It had an eight-round capacity and could fire either the regular supersonic or the slightly heavier subsonic 9mm rounds. Three features reduced the sound of the discharge and prevented the distinctive audible "crack" when the Hush Puppy was fired. The first was its slide locked in the closed position.

The second was the 5in Mk 3 Mod 0 silencer, which was screwed on to the pistol's barrel; it contained a disposable cylinder with four ¼in-thick soft plastic disks that helped decelerate the escaping gases. (The cylinder inside the silencer had to be replaced after six supersonic or 24–30 subsonic rounds had been fired.) The third feature was the Mk 144 subsonic cartridge, which traveled at a slower velocity when fired. The Hush Puppy began appearing on SEAL operations in 1968 and was often carried by the point man. Even though anyone downrange would have a hard time telling from what direction the suppressed shot came from, a dog yelping or a sentry firing his rifle (if they were not immediately hit in a vital area) would negate the usefulness of the Hush Puppy.

Communications and signals

Out in the field, the SEALs would communicate with each other by whispering and with arm and hand signals. When contact with the VC was made, SEAL radiomen (who never left the side of their patrol leader) used their radios and maps to call in fire support and extraction. They initially carried the AN/PRC-25 radio with an 8km (5-mile) range, but because its accompanying encryption device was bigger and heavier than the radio itself, SEAL radiomen spoke in code. In 1969 the AN/PRC-25 started to be replaced by the transistorized AN/PRC-77, which offered greater range, longer battery life, a special circuit for secure transmissions, more power, and easier maintenance. Both radios were remarkably durable and could be riddled with bullets yet continue to operate with the radioman unscathed. The short flexible ribbon antenna was ideal for areas with heavy vegetation, but the long rigid whip antenna was easily snagged if not tugged free by the jungle foliage. Both antennas were replaced in 1970 with a telescoping antenna.

During missions, SEAL radiomen conducted radio checks by clicking their handsets to signal to riverine craft or helicopters at a predetermined schedule; these radio checks would be replied to in kind. The VC would use captured radios, or buy them on the black market, to monitor SEAL operations and imitate false extraction calls to entrap riverine craft and helicopters. These attempts forced the SEALs to change their call signs and radio frequencies

BELOW LEFT
A SEAL squad would move quietly at a speed of about 100m (109yd) per hour across the terrain in a straight line along a compass bearing and over any natural feature encountered. One SEAL would count out their steps to measure the distance they had traveled. The only deviations made were when booby traps were encountered. (National UDT-SEAL Museum)

BELOW RIGHT
A SEAL radioman calls for extraction for his squad, a detachment of South Vietnamese soldiers, and the VC prisoner restrained in the background. Each SEAL radioman offered the lifeline his teammates needed for close fire support and extraction to achieve their mission objectives. (National UDT-SEAL Museum)

frequently. SEALs played the same trick, however, by radioing for false extractions to fool the VC into their own prepared ambushes.

To signal for a daylight extraction, SEALs would set off either a green, yellow, or red smoke grenade and then ask the crew of the riverine craft or helicopter by radio to tell them what color it was. This was necessary to prevent any listening VC attempting to set off the same-color smoke grenade to cause confusion or trigger an ambush. If the crew confirmed the correct smoke color, then the extraction would commence. For nighttime extractions, SEALs would use the same color verification radio procedure with strobe lights that flashed white, red, blue, or infrared and could be seen from above but not from the side. Signaling was also done with a flashlight with either a red or green lens. To mark their positions quickly, SEALs would fire red, white, or green magnesium parachute pop flares or small blue-green pencil flares. Depending on the mission parameters the color of a flare could indicate the loss of radio contact, the start of an assault, or the need for a quick extraction.

To mark their positions during the day, SEALs used orange- or magenta-colored T-shaped silk marker panels that had a 2ft-deep by 5ft-long crossbar with a 10ft-long stem. The radioman would place the panel on the ground to indicate where the helicopter should land or with the top of the "T" turned toward the VC, thus indicating where the close air support aircraft should drop their ordnance.

One innovative tool the SEALs used was a liquid chemical called TIARA (Target Illumination and Recovery Aid), which glowed blue-green when exposed to air. TIARA was not poisonous, but attempts to rub it off would only make it glow brighter. It was sprayed on trails so the VC would leave glowing footprints for the SEALs to follow. TIARA was later placed in a grenade and tossed into a hooch or bunker to coat its occupants for easy tracking if they got away. SEALs also used TIARA-filled grenades to mark enemy positions at night so aircraft knew where to aim their ordnance.

Transportation

To maintain the element of surprise over the VC, the SEALs had to vary the time, direction, and method of transport they used to get them to an operational area. Fortunately, the SEALs had a wide variety of maritime and air support to help guarantee, if not the success of their operations, then at least their survival. Since their bases were constantly under VC observation, the SEALs would sometimes leave in one riverine craft and transfer to another farther downstream. Riverine craft conducted several false insertions and extractions of SEAL squads during a mission to fool any nearby VC. For nighttime operations, riverine craft had to be equipped with radar so the SEALs could find their insertion point in the darkness. Their crews also had to be mindful of low tides so as to avoid being stranded, and of any floating debris that could severely damage the craft's hull or clog its engine outtakes. Riverine craft were also heavily armed with machine guns and mortars, which would fire over the heads of the SEALs they were extracting to keep the pursuing VC at bay.

SEALs initially operated in LCVPs, until they were supplemented by modified 21ft-long Boston Whalers called STABs (SEAL Team Attack Boats) with muffled engines and a shallow draft that allowed the boats to travel quickly and quietly along most waterways. The STAB's limited range and lack of radar made it necessary for the boat to be towed part of the way

to the insertion point by another riverine craft. The STAB was replaced in 1969 by the 26ft-long LSSC (Light SEAL Support Craft) with a Styrofoam-filled hull that made the craft quieter and more buoyant in the water; but that capability degraded sharply when the hull was punctured and became waterlogged. The two Jacuzzi water pumps that propelled the LSSC would constantly get clogged with weeds and debris, and the time it took for a crewman to jump into the water to unclog them left the LSSC vulnerable, especially during an ambush.

The SEALs also used the HSSC (Heavy SEAL Support Craft), a modified LCM-6 the heavy armament and cargo capacity of which was offset by its slow speed and large displacement, thereby preventing it from operating in shallow areas or sailing against strong currents. The SEALs initially conducted "reconnaissance by fire" operations from HSSCs, during which they would fire into the riverbanks and then land to pursue any VC that fired back. These HSSC operations were discontinued after 16 SEALs were wounded when a mortar round hit the top of their craft on October 7, 1966, and on April 7, 1967 when three SEALs were killed and 11 wounded after a mortar round exploded over their craft. In 1969, the HSSC was replaced by the more agile and heavily armed 36ft-long MSSC (Medium SEAL Support Craft), which could carry an entire SEAL platoon quietly along the water. The MSSC's steering and electrical cables, along with the engine throttle controls, were all located along its starboard side, which made the craft extremely vulnerable to a severe impact there.

UH-1 Hueys from local US Army helicopter companies, and from the US Navy's HAL-3, provided the SEALs with aerial reconnaissance, close air support, and infiltration/extraction in operational areas. Unlike their US Army counterparts, HAL-3 UH-1s had radar altimeters that allowed them to fly at night and in poor weather, which made them ideal for SEAL operations. Each UH-1 could carry six fully armed and equipped SEALs. Geographic intelligence for future missions was obtained by SEALs flying aboard US Army UH-1s that flew monotonous courier flights, and on frequent river patrols flown by HAL-3. As the UH-1's rotor slap could be heard from far away, SEALs, once they landed, would stay motionless on the ground and listen for 15–60 minutes to ensure the VC had not been alerted to their presence. US Army and US Navy UH-1s also conducted fake SEAL insertions to confuse the VC.

ABOVE LEFT
The MSSC proved to be the superior watercraft employed by the SEALs because it could transport an entire platoon of them quietly along the water. It also had small boarding steps conveniently installed at its bow, but their fragility led them to be supplemented with a nylon cargo net to guarantee easy extraction from the shore. (National UDT-SEAL Museum)

ABOVE RIGHT
A SEAL squad boards a STAB in October 1968. The SEAL sitting second from the left is wearing a customized grenadier vest with the rounds positioned vertically across his chest. (K-74899 courtesy of the Naval History and Heritage Command)

SEAL OPERATIONS IN VIETNAM

Advising the South Vietnamese

In March 1962 the first SEALs to serve in Vietnam arrived as advisors, in civilian clothes, in the employ of the CIA. They trained recruits for the South Vietnamese Biet Hai and LDNN (Lien Doc Nguoi Nhia) naval commandos in long-distance swimming, hand-to-hand combat, demolitions, and guerrilla tactics. Owing to the secret nature of these deployments, the SEAL advisors were not allowed to pass on what they learned and experienced to their fellow teammates after returning home. After the SEAL advisors fell under the command of MACV (Military Assistance Command, Vietnam) at the end of 1963, they became Detachment Echo as part of the Naval Advisory Detachment at Da Nang. These SEALs helped plan, but did not participate in, the Biet Hai/LDNN raids along the coast of North Vietnam that would eventually trigger the Gulf of Tonkin Incident and greater US involvement in the Vietnam War.

Detachment Echo trained several classes of LDNN in SEAL combat methods, enabling them to operate as separate units or as scouts and interpreters for SEAL platoons. They also advised established LDNN units throughout the war, usually with two SEAL advisors working with a team of seven LDNN at a time. The advisors used their diplomatic skills to avoid resentment from the LDNN by offering suggestions rather than giving orders to ensure greater cooperation and mission success. One of the SEAL advisors carried the radio and used it as a form of leverage in case the LDNN were not receptive to advice and because US units ignored radio requests with Vietnamese-sounding voices for fire support or extraction.

From August 1971 to February 1972, Detachment Sierra was established to train the LDNN at Cam Ranh Bay. In April 1972 Detachment Echo was closed down after its last two SEAL advisors left Da Nang. In May 1972, STDAT-158 (Strategic Technical Directorate Advisory Team 158) was formed with four SEALs to advise the LDNN, while helping fight off the NVA

The first SEALs to serve in Vietnam were individual advisors in the employ of the CIA. They were issued US Embassy identification cards with just alias first names printed on them and operated in civilian clothes, like the SEAL shown here, who is instructing South Vietnamese troops in the use of recoilless rifles. (National UDT-SEAL Museum)

Easter Offensive that began the previous March. Small teams of SEALs and LDNN would search for NVA positions and concentrations in the contested northern portion of I CTZ, and call in naval gunfire and Boeing B-52 Stratofortress heavy bomber strikes upon them. They also reduced rocket attacks on Da Nang by searching for and eliminating their launch sites. As the ARVN (Army of the Republic of Vietnam) counterattacked the NVA that summer, the SEALs and LDNN conducted nighttime beach reconnaissance missions for potential amphibious assaults to flank the NVA, including one north of Quang Tri City in September 1972 while the ARVN retook the town. These operations continued until the Paris Peace Accords were signed on January 27, 1973. STDAT-158 was disestablished that March, and the SEALs left Vietnam for the final time.

Deployment of the SEAL teams

Formed under the command of MACV in May 1965, Naval Forces Vietnam was left to fight its own war in IV CTZ that encompassed the Mekong Delta, with its large, flat, open areas surrounded by patches of jungle, and the RSSZ (Rung Sat Special Zone), which was a denser area full of mangrove swamps and thick jungle. When Detachment Golf, made up of three officers and 15 men from SEAL Team 1, arrived in February 1966, Naval Forces Vietnam was uncertain how to employ them. Riverine forces had already reduced VC attacks against river traffic in the RSSZ between Saigon and the South China Sea, but were unable to pursue the VC farther inland along the canals and smaller waterways. The VC operated in dispersed groups constantly on the move through the dense natural growth that allowed for the concealment of their base camps and supply caches. The SEALs decided that the best way to keep the VC from threatening river traffic was to search for and fight them farther inland inside the RSSZ. The SEALs conducted reconnaissance patrols, established temporary clandestine observation posts, and set up ambushes along suspected transit routes. Along with killing or capturing any VC fighters they encountered, the SEALs located supply caches, sampans, and base camps that were then demolished with explosives, or by air strikes. On August 19, 1966, Petty Officer Billy W. Machen became the first SEAL killed in the Vietnam War, when he warned his squad by firing his weapon, thus exposing himself to hostile fire, after spotting an impending VC ambush and was killed in the subsequent firefight. Initial successes allowed Detachment Golf to expand to two platoons with 37 men in October 1966, and by the end of the year MACV demanded that more SEAL platoons to be sent to South Vietnam.

In early 1967, SEAL Team 1 sent additional platoons to Detachment Golf, and Detachment Alfa was formed with platoons from SEAL Team 2. The SEALs were allowed to plan their own operations, but they had to be approved by their superiors in Naval Forces Vietnam, who then received clearance from their South Vietnamese counterparts. This was accomplished without divulging specific operational details, as the South Vietnamese military and government apparatus was plagued by Communist agents and security leaks. SEAL platoons were based alongside riverine forces throughout IV CTZ while some SEAL squads operated briefly in I CTZ and II CTZ. SEAL platoons stationed in one area for their entire tour became better acclimated to its strategic needs and more effective than platoons stationed at several places during their deployment. Many operations were conducted by a single SEAL squad or platoon, but a few combined operations

Two members of a SEAL squad wait outside a small village before searching it for VC and anything of intelligence value. The Stonerman in the center demonstrates how the "Tiger Stripe" was an effective camouflage pattern amid the jungle vegetation. The black portion of the pattern imitates the shadows between the large leaves and branches of the jungle growth quite well. (National UDT-SEAL Museum)

by several platoons did occur. When not operating together, the two SEAL squads of one SEAL platoon would operate separately on alternate nights. Owing to their shared training and experiences, SEAL officers and enlisted men would interchangeably lead missions. As they became more experienced in the nature of their operations and familiar with their operational area, SEAL squads required less preparation time for operations. Early in their deployments, the SEALs did not have to travel far from the water to combat the VC, but by 1968 they had to travel farther inland to initiate combat; a fact reflected in the reduced number of attacks on maritime traffic and riverine forces.

SEAL squads in the field

The small size of a SEAL squad allowed it to penetrate VC-dominated areas undetected at night. It also compelled the SEALs to be heavily armed, either to accomplish their mission or to ensure their survival if they lost the element of surprise. All squad members got to know each other during pre-deployment training, which allowed them to recognize each other in the

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SEALs IN VIETNAM – EARLY OPERATIONS

(1) SEAL, Mobile Training Team 10-62, Da Nang, April 1962
The first SEALs in Vietnam served incognito until they were publicly acknowledged by the US Navy in 1967. This SEAL wears a commercially available "Duck Hunter"-pattern shirt, OG-107 trousers, and a Junk Force badge insignia (**2**) on his beret. He is about to demonstrate the 9mm Swedish K submachine gun.

(3) SEAL, Detachment Golf, Rung Sat Special Zone, May 1966
The first SEAL platoon in-country wore commercially available "Duck Hunter"-pattern hunting outfits. The M16 rifle remained a reliable weapon in the SEAL arsenal despite the muddy and watery environment in which they operated due to vigorous cleaning and maintenance procedures. A SEAL would carry 10–14 20-round magazines, each loaded with only 18–19 rounds to ensure smooth feeding into the M16.

(4) Stonerman, Seventh Platoon, My Tho, October 1967
SEALs who carried the 13lb Stoner 63A1 were referred to as Stonermen and learned to aim instinctively while delivering automatic fire. When conducting ambushes the Stonermen used the 5.56mm ammunition belts that they carried over their shoulders while saving the ammunition in the attached drum or box to cover the withdrawal to the extraction point. These 5.56mm ammunition belts were composed of uniquely designed metallic links that had to be collected, cleaned, and reloaded by hand before each mission.

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dark, and know exactly how each other would react at the point of contact. They also wore their web gear in the same configuration, so each operator knew where to find an item of another SEAL's equipment – such as a first-aid kit – in the dark.

Before each mission the squad members checked each other for anything missing, loose, or reflective. To blend into their jungle surroundings, each SEAL would apply camouflage cream in his own individual style to his face, neck, and hands. SEALs also applied mosquito repellent to themselves to give them some relief from the tiresome insects. Although the repellent had a strong odor as it was applied, the smell would dissipate after an hour, which was the usual length of travel time before an insertion. SEALs never used deodorant, but they consumed the local *nuoc mam* dipping sauce to blend in better.

A SEAL squad included the point man, the patrol leader with the radioman close behind, three other operators (such as the corpsman), and finally the SEAL responsible for rear security. The point man was responsible for leading the squad down all the routes during an operation, and used all his senses to detect booby traps or an ambush. The squad traveled an average of 100m (109yd) per hour, in straight zigzag compass bearings and across all natural obstacles, as one operator counted their steps to determine distance. Despite the risk of being caught in the open, SEALs preferred to travel through rice paddies, because villagers and animals dwelled in the surrounding tree lines. In the monsoon season, heavy rainfall provided effective cover as it reduced visibility, absorbed loud noises such as gunfire, and kept insects away. The SEALs walked toe-first into the mud to avoid the suction noise as they pulled each foot out of it, and walked into each other's footprints to conceal their numbers and avoid booby traps. Some SEALs had to vary the weight of their loads depending on the firmness of the ground they traveled on. Those with heavy loads had to be mindful of thick mud (especially while leaping from helicopters), particularly in areas where Agent Orange herbicide had been sprayed to destroy the vegetation.

Intelligence gathering

The majority of SEAL operations involved gathering intelligence on the VC to ensure the success of future missions. US Naval Intelligence liaison officers processed and analyzed intelligence materials they received from MACV and other friendly sources, along with what the SEALs gathered, to discern any valuable targets that could be pursued. Any information that could be verified by two independent sources was considered reliable enough to act upon. SEAL platoons were allowed to establish their own intelligence networks, but the individuals involved were only paid for the supply of information that garnered results. The homegrown networks sometimes produced so much raw intelligence at a given time that the SEALs were forced to be selective as to their targets. As a SEAL platoon had only a six-month tour of duty, each platoon's homegrown network was passed on to the relieving platoon. SEALs who served as PRU advisors (see below) were given advanced training in intelligence gathering, and became valuable assets when they returned to their platoons.

One highly prized intelligence source was handwritten VC documents that chronicled their forces' locations, numbers, and plans at a given time and place. One intelligence coup occurred on February 16, 1969, when Fifth Platoon captured a VC postal station full of mail and documents.

SEALs began to retain any maps they seized when it was realized they detailed the rivers, streams, and trails the VC traveled on. Because too many VC documents were being lost aboard sinking sampans during ambushes, STABs were employed to retrieve the documents before the sampans went under. Operational security and the ability of the SEALs to react quickly, day or night, to actionable intelligence resulted in a progression of successful missions against the VC.

The ability to communicate fully with the Vietnamese people was a challenge for the SEALs, although some achieved a degree of fluency in the native language by the end of their tours. Language courses were soon included in pre-deployment training, but throughout the war the SEALs relied on LDNN interpreters to interact with villagers, captured prisoners, and Kit Carson Scouts. The latter were VC who defected under the Chieu Hoi Program, and who shared their tactics and the location of booby traps, camps, and supply caches. Each SEAL platoon operated with at least six Kit Carson Scouts, who were regarded with suspicion, with few SEALs turning their backs on them. Some Kit Carson Scouts were double agents, sent to spread false information and lead SEALs into traps, but all were made to walk point so they would be the first to be hit in the event of an ambush. Those Kit Carson Scouts who sincerely defected and served loyally with the SEALs risked having their entire family massacred by the VC in retribution. Kit Carson Scouts and LDNN interpreters donned black pajamas and carried AK-47 assault rifles to masquerade as VC to scout ahead of SEAL squads, but they also wore red neckerchiefs to identify them as friendly. They obtained intelligence from villagers, found booby traps, and located VC supplies and personnel.

ABOVE LEFT
Members of a SEAL squad pose with two of their Kit Carson Scouts, who are identified as friendly by the red-colored ribbons attached to their boonie hats. In Vietnamese the Kit Carson Scouts were referred as *Hi Chanh Vien*, "members who have returned to the righteous side." (United States Navy)

ABOVE RIGHT
Three VC suspects undergo an initial interrogation by the SEALs who captured them as they are returning to base. During operations, SEALs made every effort to capture at least one live prisoner in the strong belief that he could provide more useful intelligence than if he were dead. (National UDT-SEAL Museum)

Ambushes

Ambushes were an effective physical and psychological tool that disrupted VC operations and curtailed the combat effectiveness of their units, but they were mostly conducted only in designated free-fire zones where all the civilians had been evacuated. If the intelligence was reliable, the SEALs would set up a planned ambush against an expected column of VC along a road, trail, canal, or riverbank. For an ambush to be successful, the site chosen had to offer concealment, a clear view of the surrounding area, an effective field of fire, and a clear path back toward the extraction area.

After quietly setting up their Claymore mines and orientating their firing positions, the SEALs would wait motionless for the VC to approach. The squad members would have a parachute cord or fishing line loosely tied

between each other to communicate with each other quietly. One pull of the cord or line would make sure a fellow SEAL was alright, two pulls would indicate that someone had heard something, and three pulls would mean that someone had seen the VC approaching. Noises of jungle wildlife indicated that the SEALs were alone. They would listen for the telltale sound of metal clanging upon metal, because the VC utilized poor noise discipline when traveling at night. Some SEALs even smelled the VC approaching due to the fish-based *nuoc mam* dipping sauce they consumed with their food.

The patrol leader, positioned in the middle of the squad, would be responsible for initiating the ambush and his timing had to be just right so that all the VC in sight were engaged before the element of surprise was lost. The ambush began with the patrol leader firing on full-automatic or activating a Claymore mine, just before a SEAL on each flank would empty one magazine into the kill zone before throwing a fragmentation grenade. The rest of the SEALs would fire two magazines or one belt into their designated field of fire before the ambush ended.

Once the VC were eliminated, the SEALs would quickly search the area for anything of intelligence value before departing for extraction. Aside from reducing VC numbers and denying them supplies, these ambushes eliminated the sense of security that traveling by night afforded to the VC. Not wanting to kill civilians accidentally, SEALs kept themselves aware of curfews and social patterns of local civilians when planning these operations. Although curfews forbade civilians from traveling at night, some fishermen and woodcutters defied the ban even in free-fire zones, and thus got caught in SEAL ambushes.

Capture operations

SEALs preferred to capture valuable VC personnel alive, such as leaders, tax collectors, and couriers, because they provided more useful intelligence than if they were dead. If high-value VC were on the move, the SEALs waiting along a trail would yell out in Vietnamese "*dung lai*" (stop) and "*lai dey*" (come here) when they came within reach. If the target was being escorted along the trail, the SEALs would place Claymore mines 2–3m (6–10ft) apart to eliminate the guards at the front and rear of the column. The stunned yet unharmed high-value VC would then be led away to the extraction point.

SEALs found it simpler to abduct important VC officials directly from hamlets deep within their own territory. Having a local guide lead them to the correct hooch was ideal, but SEALs sometimes had to quickly search

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SEALs IN VIETNAM – 1968

(1) SEAL, Alfa Platoon, Binh Thuy, February 1968

This SEAL wears an M17 gas mask as protection from the tear gas being tossed into bunkers and structures to clear them of VC without detonating any munitions that might be stored in them. He is loading a standard 40mm grenade into his M79 grenade launcher, a weapon that was effective when fired at an angle against a distant target up to 275m (301yd), but less so in close-quarter fighting. The 40mm rounds that did not have time for their impact fuzes to arm in mid-air would fatally impact a person with the force of a large bullet.

(2) PRU advisor, Mekong Delta, April 1968

SEALs who worked as CIA civilian advisors to the PRU were removed administratively from the US Navy and provided with civilian cover stories. Enlisted SEALs enjoyed the assignment because they were assumed to be officers. His CAR-15 rifle proved an ideal weapon in the confining nature of the jungle.

(3) SEAL, Ninth Platoon, Vinh Long, May 1968

This SEAL is wearing a rifleman's version of the SEAL flotation jacket, which had two internal rubber lungs on both sides that were inflated by means of CO_2 cartridges. Ammunition pouches were attached on the jacket's top to keep them dry while the wearer operated in the middle of a river. Variants for grenadiers and radiomen were also manufactured. He is armed with an Ithaca Model 37 12-gauge pump-action shotgun modified with a "duckbill" extension attached to the end of its barrel to flatten and widen the spread of the buckshot.

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each one in a hamlet to find their quarry. The smell of burning mosquito coils or lit candles at night (to keep evil spirits away) were useful beacons to guide the SEALs to targeted hamlets. Not alerting VC guards was especially challenging given that dogs, pigs, chickens, and ducks were vigilant to the slightest noise. Many of these missions were conducted in the rain to mask any sounds that might alert a human or animal sentry. The VC began to call the SEALs "the men in green faces" after many of them were rudely awakened to see camouflaged faces staring back at them.

SEALs initially restrained their prisoners with Smith & Wesson steel handcuffs and duct tape. The shiny metal of the handcuffs reflected too much light, however, and painting them only resulted in the paint flaking off. Plastic strips designed to secure electrical cables became a better alternative because they were impossible to break out of. Some SEALs used a simple prisoner-handling kit made up of a gag, blindfold, and rope. With their prisoner marching before them to guide them through any booby traps, SEALs would move quickly to their extraction point before any local VC could mount an effective pursuit.

Not all capture missions were successful, however, with many intended targets shot while fighting back, escaping, or being somewhere else. Many VC slept in the open fields at night to avoid being abducted. It was these types of missions that caused no small degree of apprehension and defection among the VC. One notable capture operation occurred on July 2, 1967, when Juliet and Kilo platoons, aboard the destroyer USS *Brush* (DD-745), landed in several IBSs 32km (20 miles) northeast of Phan Theit in the Le Hong Phong Secret Zone in II CTZ. The SEALs moved inland, and after a brief chase they killed one VC leader and captured three others, along with important documents.

One unorthodox method of capturing high-value VC personnel was "Parakeet" operations, which began in January 1968. An informer accompanied by a SEAL PRU advisor, a Stonerman, and a PRU squad of 4–5 men would fly aboard a single UH-1 at 1,500ft, impersonating a mail or courier chopper. Four helicopter gunships would follow them from just beyond the horizon. The operation would take place in the middle of the siesta between 1100hrs and 1400hrs, to guarantee that the targeted individual was indoors. Upon reaching the hamlet the UH-1 would quickly land in front of the hooch identified by the informer as the one containing the target. The four helicopter gunships would then immediately arrive to provide top cover. The SEAL advisor would rush into the hooch to secure the prisoner, while the Stonerman and the PRU squad formed a quick perimeter around it. Once the prisoner was secured, everyone would leave on the UH-1 before anyone on the ground had time to react.

The raid on Hon Tam Island

In January 1969, Delta Platoon was sent to Cam Ranh Bay in II CTZ, to support efforts against VC activity along the coast. In March 1969, two VC defectors revealed that several members of the VCI (Viet Cong Infrastructure) and a sapper team were on Hon Tam Island in Nha Trang Bay. Lieutenant Joseph R. Kerrey led Second Squad on the night of March 13/14 in a bid to take the seven VC men and one woman prisoner. The SEALs landed by boat on the rocky beach on the ocean side of the island, where most of them removed their boots before climbing a 350ft-high rocky cliff without ropes, to put them on higher ground behind two small VC camps.

Vinh Binh, December 1967: SEALs fire on an enemy bunker camouflaged as a hut. (USN 1128588 courtesy of the Naval History and Heritage Command)

After reaching the top of the cliff, Kerrey divided his squad to assault both camps simultaneously. Four SEALs reached one camp, but could not signal Kerrey's group because the rocky terrain blocked their view. They opened fire when they saw two VC walk away. At the same time a SEAL in Kerrey's group tripped, alerting the VC, who opened fire on them. While the SEALs returned fire, a grenade landed at Kerrey's feet; the resulting explosion severely injured him and wounded another SEAL. All the VC were killed in the firefight before a helicopter arrived to evacuate Kerrey. Several VC documents were gathered before the remaining SEALs left Hon Tam by boat. Kerrey's wounds resulted in the loss of his right leg below the knee. For his leadership during the raid, on May 14, 1970 Kerrey became the first US Navy SEAL to receive the Congressional Medal of Honor.

Provincial Reconnaissance Units

Established in early 1967, the PRUs formed a paramilitary force composed of anti-communists of Vietnamese, Cambodian, Chinese, and other ethnic origins whose mission was to eliminate the VCI political organization, which operated as a shadow government that supported VC operations and facilitated NVA units that infiltrated down from the Ho Chi Minh Trail. Numbering no more than 5,000 men in total, the PRUs operated in every province of South Vietnam in tight-knit groups of 50–150 personnel that were secure from VC spies. VC and NVA defectors later joined their ranks through the Chieu Hoi Program. PRUs operated in their home provinces where they knew the territory and its inhabitants. The CIA recruited them to support the Phoenix Program, designed to neutralize the VCI. Although placed under the control of MACV in May 1967, the PRUs operated under the direct control of South Vietnamese province chiefs, and were paid and equipped by the CIA. SEALs from Detachment Bravo were temporarily and covertly assigned to the CIA as civilian advisors to lead PRU operations in IV CTZ. SEAL advisors were given additional training in the use of foreign weaponry, Vietnamese language skills, intelligence gathering, and the VC infrastructure. Although they served in an administrative role without any disciplinary authority, their presence in the field, along with the close fire support and helicopters they provided, was enough leverage to ensure the accountability of PRU actions. They were often the only Americans operating in certain areas and were thus jealously guarded by their PRU – if not out of loyalty then to ensure the PRU members got paid.

After receiving information from their CIA contact or from their own intelligence gathering, SEAL advisors would lead their PRUs in attempts to capture high-value VC officials to obtain their knowledge and convince them to change sides. Some of these former VC served in the PRUs as guides, but the more devoted cadre refused to be taken alive and were thus killed in action. Those who did defect revealed their secret passwords that remained the same for months, thereby allowing the PRUs to reach their objectives with a greater element of surprise. The quality of PRU intelligence, combined with the heavy firepower and close fire support the SEAL squads provided, made for several successful joint operations in which they assaulted numerous objectives simultaneously. SEAL advisors forbade the use of torture and encouraged bargaining and intellectual mind games to obtain information from interrogations. Captured VC women, however, did not give up what they knew so easily, and used their strong mental resilience to hold out for at least 24 hours to allow their high-value cohorts time to get away. One notable intelligence success was the foiling of a planned North Vietnamese offensive during the 1970 Tet holiday after the PRU captured the plans for it. SEAL-led PRUs also conducted ambushes, helped liberate POW (prisoner of war) camps, undertook reconnaissance, and engaged in open combat with VC units through village sweeps and direct assaults on base camps. The effectiveness of the PRUs was reflected by the generous bounties the VC placed on every SEAL advisor.

In March 1969, Detachment Bravo, along with the PRUs, was transferred from MACV to South Vietnam's Ministry of the Interior. That fall, SEAL platoons were ordered to stop conducting joint operations with the PRU in reaction to a US domestic backlash over the perception that the Phoenix Program conducted only assassinations. The simultaneous fallout from news of the My Lai Massacre led to the SEAL advisors being ordered not to

accompany their PRU on missions to avoid similar incidents. This rule was ignored, as SEAL advisors found ways to be close by while their PRUs were in combat. The last SEAL advisor to operate with the PRU was withdrawn in January 1970, and Detachment Bravo was disbanded two months later. At least 60 SEALs served with the PRU, five of whom were killed in action. PRUs that were led by SEAL personnel killed 2,120 VC and captured a further 2,718. Although the Phoenix Program proved to be its greatest threat, especially at the village and hamlet level, it did not completely eliminate the VCI.

Rescuing prisoners of war

Beginning in June 1967, SEAL platoons were on call to liberate any prison camps in the Mekong Delta that might hold American POWs. Many of these rescue missions found the camps recently abandoned. On August 30, 1968, a SEAL advisor and his PRU overran a POW camp and liberated 49 South Vietnamese POWs after being tipped off by two escapees. On October 6, 1968, the wives of two ARVN POWs guided a SEAL squad from Alfa Platoon and a small PRU force aboard several PBRs (Patrol Boats, Riverine) to a POW camp on Con Coc Island. They quickly seized the camp, liberated 26 South Vietnamese POWs, and captured a VC tax collector.

On August 21, 1970, Sixth Platoon, along with a platoon of South Vietnamese soldiers, landed 6km (4 miles) from a POW camp near Vi Thanh. They assaulted the camp as US Army helicopter gunships, Royal Australian Air Force English Electric Canberra bombers, and the destroyer USS *Southerland* (DD-743) fired on three sides of the camp's perimeter to encourage the guards to flee without their POWs. Unfortunately, the SEALs found the camp empty as the guards took their POWs south through the naval gunfire. The SEALs gave chase and after two hours they caught up with 28 abandoned South Vietnamese POWs. Sixth Platoon received a Navy Unit Commendation for this mission.

On the night of November 21/22, 1970, a SEAL squad from Whiskey Platoon, three Kit Carson Scouts, an ARVN interpreter, and a fisherman serving as a guide paddled up a canal in three sampans and reached the POW camp near the southernmost tip of the Cau Mau Peninsula just as dawn approached. Finding themselves out of radio range, the squad leader

SEALs display captured VC armaments, a flag, and a sampan. Sampans were ideal for silent infiltration into VC-held areas. SEALs preferred to use captured sampans rather than borrowing or renting them from local villagers, in order to maintain mission security. When dressed in black pajamas and armed with AK-47s, SEALs in sampans could travel unnoticed at night toward their objective. (National UDT-SEAL Museum)

On the night of November 21/22, 1970, 19 South Vietnamese POWs were rescued by SEALs of Whiskey Platoon from their POW camp near the southernmost tip of the Cau Mau Peninsula in the Mekong Delta. The SEALs would spearhead other POW rescue missions throughout the war, but no American POWs were ever liberated by direct action. (National UDT-SEAL Museum)

was about to signal their MSSC for support when he dropped the signal flare onto the bottom of his sampan, alerting the guards. The Kit Carson Scouts immediately assaulted the camp, with the SEALs quickly following, which forced the guards to flee and allow the liberation of 19 South Vietnamese POWs.

Out of all the rescue missions the SEALs launched, six were successful in liberating a total of 152 South Vietnamese POWs. No Americans were ever rescued from VC captivity until POWs were released in the spring of 1973.

Tet 1968

In the early hours of January 31, 1968, the Tet Offensive swept through South Vietnam, with ten of the provincial capitals and four large towns in IV CTZ being attacked by the VC. The SEALs based at the provincial cities of My Tho, Can Tho, and Vinh Long fought back with air and artillery support to first prevent the cities from being completely overrun before assisting in their liberation. Chau Phu's provincial capital of Chau Doc, located less than 1.6km (1 mile) from the Cambodian border, was overrun by two VC battalions. SEALs from Eighth Platoon assisted a PRU of 150

G **SEALs IN VIETNAM – 1969**

(1) Stonerman, Alfa Platoon, Cau Mau Peninsula, January 1969

The Stoner 63A1 this SEAL is carrying has a 16in Mk 23 Commando barrel, which made it a more reliable weapon. Unlike his fellow SEALs he is wearing his 5.56mm ammunition belts under his "Tiger Stripe"-pattern jacket to help keep dirt out of the links before loading them. The brass could also reflect moonlight, which might serve as a beacon to the VC.

(2) SEAL, Third Platoon, Mekong Delta, December 1969

SEALs were given wide latitude in the types of weapons they carried in the field, provided they helped accomplish the mission. This included the British World War II-era 9mm Sten submachine gun with attached suppressor this SEAL is carrying, along with 350 rounds in the ammunition bag slung over his shoulder. The 9mm round fired by the Sten was only powerful enough to be effective at close range.

(3) SEAL, Echo Platoon, Rung Sat Special Zone, June 1969

SEALs utilized all their senses, especially their night vision, while operating in the darkness; but that diminished once the muzzle flashes of their ambush lit up the area. One useful tool was the AN/PVS-1 Starlight Scope, which was mounted on riverine craft and M16A1 rifles as shown here. Unfortunately, the 8lb device was delicate, consumed a lot of battery power, was difficult to use on overcast nights, and left a green ring around the eye of the user. It also took away the user's normal night vision for at least 30 minutes.

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men in liberating Chau Doc from the VC in street fighting throughout the city. Several SEALs in two jeeps helped rescue 16 trapped American civilians from the Civil Operations and Revolutionary Development Support compound, and a US Agency for International Development nurse from her house, which was occupied by the VC. Although the Tet Offensive resulted in the VC being utterly defeated with heavy casualties in the Mekong Delta, SEAL squads continued to encounter VC units in company or battalion strength due to better armed and equipped NVA soldiers filling their ranks.

Drawdown

"Vietnamization" saw US forces gradually start to withdraw from Vietnam in mid-1969. As the South Vietnamese took greater control in prosecuting the war, they became less cooperative with intelligence and allowing the SEALs to operate freely. Some South Vietnamese liaison officers who approved SEAL operations often tipped off the VC, which resulted in the SEALs fighting their way out of an ambush. Their operations became more treacherous when they eventually became the only US units that actively engaged the VC. By 1971, the SEALs took a less aggressive posture as all free-fire zones were dissolved and all VC could not be fired upon unless they fired first. SEALs were no longer allowed to use white-phosphorus or tear-gas grenades, nor could they use helicopters to enter an area, to avoid appearing aggressive. On June 12, 1971, Tenth Platoon became the last platoon from SEAL Team 2 to depart, while Mike Platoon from SEAL Team 1 earned the distinction of becoming the last SEAL platoon to leave Vietnam on December 7, 1971. Morale among the SEALs, regardless of the political and military situation, remained consistently high, as

BELOW LEFT
SEALs go ashore after wading through chest-deep mud on a combat operation in South Vietnam, May 1970. The man in the center carries a Stoner machine gun. (80-G-84316 courtesy of the Naval History and Heritage Command)

BELOW RIGHT
A Stoner-armed SEAL moves through deep mud as he makes his way ashore from a boat during a combat operation in South Vietnam, May 1970. (K-84315 courtesy of the Naval History and Heritage Command)

demonstrated by the fact that no SEAL platoon that deployed was ever short of volunteers throughout the conflict.

The rescue of BAT-21

On March 30, 1972, with nearly all US forces having been withdrawn from South Vietnam, the NVA launched a conventional invasion to overrun the country. On April 2, a Douglas EB-66C Destroyer escorting B-52s bombing NVA concentrations in Quang Tri Province, was shot down by a surface-to-air missile, with only Lieutenant Colonel Iceal E. "Gene" Hambleton, USAF able to eject. Hambleton landed directly in the middle of the NVA advance, which thwarted repeated attempts to rescue him and resulted in several forward air control aircraft and rescue helicopters being shot down.

US Marine Corps Lieutenant Colonel Ronald S. "Andy" Anderson, who headed the Joint Personnel Recovery Center in Saigon, saw an opportunity to rescue Hambleton by infiltrating a rescue team on foot through an area occupied by 30,000 NVA soldiers. On April 8, a plan was approved for SEAL Lieutenant Thomas R. Norris and five LDNN to rescue Hambleton, who was told to walk south to the Mieu Giang River so he could be reached. Another shot-down airman, First Lieutenant Mark N. Clark, USAF, had already concealed himself along the south bank of the river east of Hambleton. Norris and his team set up at an old French bunker occupied by a small detachment of ARVN Rangers and three tanks along the Mieu Giang, east of the downed airmen and NVA-occupied territory.

On the night of April 10/11, with the water too cold and fast to walk through, the rescue team infiltrated 1,830m (2,000yd) west through thick vegetation along the south bank of the Mieu Giang for two hours before they saw Clark float downstream toward them. A small NVA patrol passing between them forced Norris to let Clark drift past. Clark was immediately informed by a forward air control aircraft to stop where he was, and after dodging several more NVA patrols, Norris and his team found him near dawn, and took him back to the bunker. Shortly afterward, they were hit with a barrage of machine-gun, rocket, and mortar fire. Anderson and Lieutenant Tho Ngoc Vu, in charge of the LDNN detachment, were wounded and evacuated along with Clark in an armored personnel carrier.

Hambleton, growing weak and disorientated after ten days of evading the NVA, was unable to walk and meet Norris' team on the night of April 12/13. Despite two of the remaining LDNN refusing to participate further, Norris knew that a rescue on the following night would be the last best chance to recover Hambleton alive. On the night of April 13/14, Norris and LDNN Petty Officer Nguyen Van Kiet dressed like Vietnamese fishermen and paddled a sampan upstream along the fog-shrouded banks of the Mieu Giang for 3,000m (3,280yd) past several concentrations of NVA. After six hours they emerged from the fog under the Cam Lo Bridge, the location of which helped Norris pinpoint and recover Hambleton 700m (765yd) downstream on the south bank of the Mieu Giang.

Hambleton was placed on the bottom of the sampan with two life preservers and foliage placed on top of him. Paddling furiously downstream as daylight enveloped them, Norris and Van Kiet ignored and outdistanced an NVA patrol along the shore and called in close air support against a machine gun that fired on them from a deserted village on the south bank. Norris and Van Kiet returned to the bunker, where they withstood another rocket and machine-gun barrage, before they and Hambleton were taken away in an

armored personnel carrier. Hambleton lost 45lb during his time in the jungle, but made a full recovery. Norris would receive the Congressional Medal of Honor on March 6, 1976 and Nguyen Van Kiet the Navy Cross for their rescue of Clark and Hambleton.

Operation *Thunderhead*

In June 1972, USS *Grayback* deployed off the coast of North Vietnam to recover POWs who were planning to escape from the "Hanoi Hilton." Two separate sorties by a pair of Lockheed SR-71A "Blackbirds," which created a sonic boom over Hanoi on May 2 and 4 respectively, signaled to the POWs that they had 4–6 weeks to break out and follow the Red River to where it emptied into the Gulf of Tonkin. Submerged within North Vietnamese territorial waters, USS *Grayback*, with its former missile hangars modified to accommodate as well as deploy and recover commandos underwater, had 14 men from Alfa Platoon and UDT-13's SDV Platoon aboard. The SEALs would set up a clandestine observation post on a small island 4km (2½ miles) off the coast to spot any escaped POWs. The SEALs were to bring back any POWs aboard the Mk VII Mod 6 SDVs to USS *Grayback*, or call in a helicopter to recover them to the US fleet offshore.

On the night of June 3/4, the first SDV launched was unable to find the island due to strong underwater currents, and could not find its way back to USS *Grayback* before it ran out of battery power. The two frogmen and two SEALs pulled the inert SDV away from the coast without drawing the attention of nearby North Vietnamese patrol boats. Seven hours later the four men were rescued by a Sikorsky HH-3A Sea King helicopter that took them to the guided missile cruiser USS *Long Beach* (CGN-9) after sinking the SDV with machine-gun fire.

Strong adherence to radio silence prevented those on USS *Grayback* from knowing the fate of the first SDV before launching a second one on the night of June 4/5. Too much ballast was placed aboard the second SDV, however, and it sank to the bottom. Unable to move the SDV off the seabed, its crew

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SEALs IN VIETNAM – LATER OPERATIONS

(1) SEAL, Juliet Platoon, Dung Island, May 1970

Some SEALs cut off the sleeves of their flotation jackets to make them into vests for greater freedom of movement. This radioman has an XM177E2 carbine with an XM148 grenade launcher attached. He carries at least 30 40mm high-explosive, buckshot, and special rounds as well as ten 20-round magazines. He is barefoot, which aided the detection of any tripwires and masked his presence by avoiding making boot prints.

(2) SEAL, Victor Platoon, Dong Tam, June 1971

This SEAL demonstrates that different "Tiger Stripe" patterns allowed for some interesting camouflage combinations. Despite the dangers of exposure to dirt and detection from reflection, many SEAL gunners wore their 7.62mm ammunition belts "Pancho Villa" style for quick access. His M60 machine gun's barrel has been cut off just forward of the gas port and its flash suppressor reattached so it is nearly level with the gas piston. The M60's front and rear sights and bipod have also been removed and its butt stock replaced with a small aluminum cap, reducing the weapon's weight from 23lb to 16lb.

(3) SEAL, Seventh Platoon, Mekong Delta, January 1971

SEALs wore denim jeans because they lasted longer in the harsh environments than regular-issue service trousers. They also wore long underwear, leotards, or pantyhose underneath to stay warm in the water and to keep mosquitoes and leeches away to prevent infection and disease. This SEAL wears a bandage as a headscarf to keep the sweat out of his eyes and to help reduce his overall silhouette. He has a captured VC chest rig to carry the clips for his CAR-15 rifle.

(4) Naval Special Warfare uniform breast insignia, enlisted men

(5) Naval Special Warfare uniform breast insignia, officers and chiefs

On October 16, 1970, the Naval Special Warfare uniform breast insignia was authorized for all SEALs to wear on their service dress uniforms. The insignia had a vertical naval anchor at the center with a horizontal Neptune trident behind it. A flintlock pistol at an angle was placed before the anchor with an eagle on top of the trident. Initially the insignia was silver (**4**) for enlisted men and gold (**5**) for officers and chiefs. Soon all frogmen and SEALs were authorized to wear just the gold version. It continues to be worn by SEALs today.

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abandoned it before they ran out of air. At the same time an HH-3A urgently flew the first SDV crew back to USS *Grayback* so they could warn about the strong underwater currents. Flying in overcast weather with high winds and swells, the helicopter crisscrossed the area, and even accidentally flew over the North Vietnamese coast briefly, while trying to find the submarine. The helicopter mistook the flares and strobe lights of the second SDV crew floating on the surface for a signal light from USS *Grayback*, and the frogmen and SEALs leapt out.

Unfortunately, they jumped higher than the safe maximum height of 20ft downwind, and the increased velocity made them hit the water hard. Platoon leader Lieutenant Melvin S. Dry died instantly from a broken neck, and one frogman suffered a broken rib while the other two men were badly shaken up. The wetsuits they wore under their uniforms allowed them to float with Dry's body throughout the night, along with the second SDV crew, until everyone was rescued the next morning. USS *Grayback* remained on station for two more days before the rescue operation was canceled. No POWs attempted to escape from the "Hanoi Hilton" during this time out of fear of reprisals against the remaining POWs. Lieutenant Dry became the last US Navy SEAL killed during the Vietnam War, but the secrecy of the rescue operation meant that his death was officially classified as a training accident for many years after.

Saving Lieutenant Thomas R. Norris

On the night of October 30/31, 1972, Lieutenant Thomas R. Norris, Engineman Second Class Michael E. Thornton, and three LDNN arrived off the coast of South Vietnam in two junks to reconnoiter the NVA-occupied Cua Viet River Base and to survey its defenses. The team paddled toward the shore in two IBSs before swimming the rest of the way. Instead of landing south of the Cua Viet River as planned, however, the team realized that a navigation error had landed them south of the Ben Hai River, 16km (10 miles) north of the Cua Viet.

After several hours of carefully scouting around a few NVA encampments, they decided to leave in the early hours of October 31. They gathered at a large reinforced foxhole-shaped bunker to determine their exact position to facilitate their extraction. Two NVA soldiers then appeared on the beach. One was quickly subdued by a blow to the head with the butt of Thornton's CAR-15, but the LDNN officer failed to eliminate the other soldier with a Hush Puppy, and he ran away to alert a nearby unit of NVA.

As the team came under assault, their prisoner revealed to them their exact position. For two hours, before naval gunfire support became available, they kept the NVA at bay with well-aimed rifle fire. The destroyer USS *Morton* (DD-948) sailed north toward them and kept firing spotting rounds until Norris could see them. More NVA reinforcements had arrived, however, and the team decided to split up so they could leapfrog and cover each other to a more defensible sand dune 460m (503yd) to the northwest. Thornton and two LDNN got there first, while Norris with the LDNN radioman at the bunker told USS *Morton* to fire for effect.

Just before the first salvo arrived, Norris was about to fire a M72 LAW when a bullet hit the left side of his forehead. The LDNN radioman left Norris for dead and ran toward Thornton's position with a damaged radio that prevented further communication with USS *Morton*. Thornton ran back to get Norris' body, and shot two NVA soldiers at close range before recovering him. As he ran back toward the beach, Thornton was propelled

forward by the blast from a 5in shell. Norris then showed signs of life as Thornton got him back to the rest of the team. With the NVA approaching, they leapfrogged 230m (252yd) across the beach into the water. Thornton, who was shot in the left calf and with slight shrapnel wounds, swam while pushing a semiconscious Norris and a wounded LDNN ahead of him for three hours. They were recovered by their junks offshore, which sailed them to the heavy cruiser USS *Newport News* (CA-148) for medical treatment.

Norris miraculously survived his near-mortal wound and Thornton would receive the Congressional Medal of Honor on October 15, 1973, for rescuing him. When Norris later received his Medal of Honor for the rescue of Clark and Hambleton, their mission of October 30–31, 1972 (see above) became the first time in history that a Medal of Honor recipient had saved the life of another Medal of Honor recipient.

Shown here in December 1972, SEAL advisors continued to work with the LDNN in the field until the last SEAL to operate in combat in Vietnam left on February 9, 1973, nearly ten years after the first SEAL advisors arrived. (United States Navy)

AFTERMATH

Even before the fall of Saigon in April 1975 a period of austerity for the US military had begun that would last for the rest of the decade. US Navy UDTs and SEAL teams were not immune as smaller budgets posed serious challenges in providing the necessary amount of training and equipment to keep those units operationally viable. Despite operating below their authorized staffing levels, frogmen and SEALs were still able to conduct joint training and military exercises with allied nations across the globe. The massive military buildup of the 1980s also ushered in an era of reorganization and reform that saw the UDTs amalgamated into the SEAL teams in May 1983 and the establishment of the Naval Special Warfare Command (the naval component of the United States Special Operations Command) in April 1987. SEALs would not be bloodied again in combat until Grenada in October 1983 and Panama in December 1989. By then terrorism and other threats originating from the Middle East would see SEAL teams increasingly shift their focus to counterterrorism and other military operations in that part of the world for the next several decades.

SELECT BIBLIOGRAPHY

Bizet, Oliver & Jean-Ghui Lebeau (2015–16). "Les SEALs et UDT au Vietnam," *Militaria* 363 (October 2015), 366 (January 2016), 369 (April 2016), and 372 (September 2016). Paris: Histoire & Collections.

Bosiljevac, T.L. (1991). SEALs: *UDT/SEAL Operations in Vietnam*. New York, NY: Ivy Books.

Constance, Harry & Randall Fuerst (1997). *Good to Go: The Life and Times of a Decorated Member of the U.S. Navy's Elite SEAL Team Two*. New York, NY: Morrow.

Couch, Dick & William Doyle (2014). *Navy SEALs: Their Untold Story*. New York, NY: Morrow.

Cummings, Dennis J. (1998). *The Men Behind the Trident: SEAL Team One in Vietnam*. New York, NY: Bantam Books.

Dockery, Kevin (1996). *Special Warfare: Special Weapons: The Arms & Equipment of the UDT and SEALS from 1943 to the Present*. Chicago, IL: Emperor's Press.

Dockery, Kevin (2000). *Free Fire Zones: The True Story of U.S. Navy SEAL Combat in Vietnam*. New York, NY: HarperTorch.

Dockery, Kevin (2004). *Navy SEALs: A Complete History: from World War II to the Present*. New York, NY: Berkley Books.

Dockery, Kevin (2005). *Weapons of the Navy SEALS*. New York, NY: Berkley Caliber.

Dockery, Kevin (2008). *Operation* Thunderhead*: The True Story of Vietnam's Final POW Rescue Mission–and the Last Navy SEAL Killed In Country*. New York, NY: Berkley Caliber.

Dockery, Kevin & Bill Fawcett (1999). *The Teams: An Oral History of the U.S. Navy SEALs*. New York, NY: Avon Books.

Dwyer, John B. (1998). *Commandos from the Sea: The History of Amphibious Special Warfare in World War II and the Korean War*. Boulder, CO: Paladin Press.

Shown here in front of an LCM-6, these SEALs from Detachment Golf helped form the template for the types of operations subsequent SEAL platoons performed in South Vietnam. Starting in the spring of 1966, they began to move inland from the waterways to combat the VC through ambush and direct assault. (National UDT-SEAL Museum)

Enoch, Barry W. & Gregory A. Walker (1996). *Teammates: SEALs at War*. New York, NY: Pocket Books.

Fawcett, Bill (1995). *Hunters & Shooters: An Oral History of the U.S. Navy SEALs in Vietnam*. New York, NY: Avon Books.

Gormly, Robert A. (1999). *Combat Swimmer: Memoirs of a Navy SEAL*. New York, NY: Onyx.

Haas, Michael E. (2000). *In the Devil's Shadow: U.N. Special Operations During the Korean War*. Annapolis, MD: Naval Institute Press.

Jordan, David (2003). *The U.S. Navy SEALs: Sea, Air, and Land Specialists*. San Diego, CA: Thunder Bay Press.

Keith, Thomas H. & J. Terry Riebling (2010). *SEAL Warrior: The Only Easy Day was Yesterday*. New York, NY: Thomas Dunne Books.

McPartlin, Greg (2005). *Combat Corpsman: The Vietnam Memoir of a Navy SEALs Medic*. New York, NY: Berkley Caliber.

Norris, Tom, Mike Thornton, & Dick Couch (2016). *By Honor Bound: Two Navy SEALs, the Medal of Honor, and a Story of Extraordinary Courage*. New York, NY: St. Martin's Press.

Smith, Gary R. (1996). *Master Chief: Diary of a Navy SEAL*. New York, NY: Ivy Books.

Smith, Gary R. & Alan Maki (1996a). *Death in the Delta: Diary of a Navy SEAL*. New York, NY: Ivy Books.

Smith, Gary R. & Alan Maki (1996b). *Death in the Jungle: Diary of a Navy SEAL*. New York, NY: Presidio Press.

Stubblefield, Gary & Hans Halberstadt (1995). *Inside the US Navy SEALs*. Osceola, WI: Motorbooks International.

Vistica, Gregory L. (2003). *The Education of Lieutenant Kerrey*. New York, NY: Thomas Dunne Books.

Walsh, M.J. & G. Walker (1995). *SEAL!* New York, NY: Pocket Books.

Waterman, Steven L. (2008). *Just a Sailor: A Navy Diver's Story of Photography, Salvage, and Combat*. Cleveland, OH: FindTech, Ltd.

Watson, J. & K. Dockery (1993). *Point Man*. New York, NY: Morrow.

Watson, J. & K. Dockery (1997). *Walking Point*. New York, NY: Morrow.

Young, Darryl (1990). *The Element of Surprise: Navy SEALS in Vietnam*. New York, NY: Ivy Books.

Young, Darryl (1994). *SEALs, UDT, Frogmen: Men Under Pressure*. New York, NY: Ivy Books.

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Dedication

This book is dedicated in loving memory to Kathryn A. Stanton.

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FRONT COVER: In this posed shot, a SEAL squad and the crew of their LSSC remain vigilant as they approach the shore. The radar mounted above the men was often the only means of locating the correct infiltration site at night. Owing to the LSSC's limited fuel capacity, such vessels were towed by other riverine craft part of the way during missions. (NARA)
TITLE PAGE: Three SEALs approach a VC bunker complex on Tan Dinh Island in the Mekong Delta in March 1968. Two of the SEALs are carrying satchel charges that will demolish the bunkers. Despite their best efforts, SEALs never found an effective way to destroy rice caches. (K-46398 courtesy of the Naval History and Heritage Command)

Abbreviations

APD	Transport, High Speed
ARG	Amphibious Ready Group
ARVN	Army of the Republic of Vietnam
ATB	Amphibious Training Base
CIA	Central Intelligence Agency
CTZ	Corps Tactical Zone
HAL	Helicopter Attack Squadron (Light)
HBT	Herringbone Twill
HBX	High Blast Explosive
HSSC	Heavy SEAL Support Craft
IBS	Inflatable Boat, Small
LAW	Light Anti-Tank/Anti-Armor Weapon
LCM	Landing Craft, Mechanized
LCP(L)	Landing Craft, Personnel, Large
LCP(R)	Landing Craft, Personnel, Ramp
LCR(S)	Landing Craft, Rubber, Small
LCVP	Landing Craft, Vehicle and Personnel
LDNN	Lien Doc Nguoi Nhia
LSSC	Light SEAL Support Craft
LST	Landing Ship, Tank
LVT	Landing Vehicle, Tracked
MACV	Military Assistance Command, Vietnam
MSSC	Medium SEAL Support Craft
NAB	Naval Amphibious Base
NVA	North Vietnamese Army
PCF	Patrol Craft Fast
POW	Prisoner of War
PRU	Provincial Reconnaissance Unit
RSSZ	Rung Sat Special Zone
SDV	Swimmer Delivery Vehicle
SEAL	Sea, Air, and Land Team
SOG	Special Operations Group (Korean War)
STAB	SEAL Team Attack Boat
STDAT-158	Strategic Technical Directorate Assistance Team 158
TIARA	Target Illumination and Recovery Aid
TNT	Trinitrotoluene
UDT	Underwater Demolition Team
UN	United Nations
USO	United Service Organizations
VC	Viet Cong
VCI	Viet Cong Infrastructure